

HOUSE OF REPRESENTATIVES.

WILLIAM T. G. MORTON, M. D.—SULPHURIC ETHER.

1852.

Referred to a Select Committee.

Dr. WILLIAM H. BISSELL, of Illinois, Chairman.

The Select Committee to whom was referred the memorial of Dr. William T. G. Morton, asking remuneration from Congress for the discovery of the anæsthetic or pain-subduing properties of sulphuric ether,

REPORT:

That upon the suggestion of the memorialist, that his claim to the discovery was contested by Dr. Charles T. Jackson, of Boston, the chairman addressed to him a letter, notifying him of the proceedings, and of the day when the committee would begin the investigation; advising him, that if he desired to do so, he was at liberty to contest Dr. Morton's application. The chairman received a statement from Dr. Jackson, in reply. Afterwards a memorial from Dr. Jackson was presented to the House, and referred to your committee. And on the 20th day of Dec. 1851, at a meeting held pursuant to notice, both parties appeared before your committee: Dr. Morton by his counsel, J. M. Carlisle, Esq., and Dr. Jackson by J. L. Hayes, Esq. In his paper Dr. Jackson presented objections to the inquiry, combining, in effect, a plea that the matter was *res judicata*, and a plea to the jurisdiction of Congress, which were discussed and considered, as preliminary to a general investigation. The objections are embodied in the following extracts.

After averring that the discovery was his, and his only, and that he alone gave it to the world, Dr. Jackson proceeds as follows:

"He, the undersigned, therefore, distinctly and unequivocally claims to be the sole and original discoverer of the anæsthetic and pain-subduing properties of sulphuric ether; and hereby communicates the fact to the Congress of the United States, and declares that his rights have been fully admitted by all the scientific societies that have examined into the claims of the numerous aspirants to the honor of the discovery, and that, in consequence of this result of investigations of all the claimant's pretensions, the National Academy of Sciences of France awarded to the

undersigned "the Monthyon prize for the greatest medical discovery," and the Government of France awarded to him also the Cross of the Legion of Honor, and the King of Sweden the gold Medal of Merit. He, the undersigned, therefore, regards the question of discovery settled in the scientific world, and cannot but express his surprise," &c., &c.

And, again, he "begs that he may be put to no further trouble and expense in defending his scientific rights to the discovery."

And, again, he begs "that he may be allowed to pursue his studies and labors in peace, and not be compelled to spend his valuable time in waiting upon Congress, merely for the purpose of seeing that his rights suffer no detriment."

Your committee being unable to perceive the force of these objections, overruled them, and in the discharge of the duty imposed on them by the House, proceeded with the investigation. A mass of written and printed statements was offered by Dr. Jackson, tending to impeach the character of Dr. Morton, which the latter requested should be received, he being allowed time to produce rebutting evidence, and to adduce evidence on his part impeaching Dr. Jackson's character for veracity, and proving several cases in which he had claimed the inventions* of others as his own. This your committee rejected, deeming it wholly irrelevant to the subject committed to them by the resolution of the House, and leading to a long and laborious trial of many immaterial issues.

Their first inquiry was directed to the question whether a discovery had in fact been made, important to mankind, and in its importance and value to the American people worthy of national recognition and reward.

The alleged discovery consists in the total annihilation or prevention of pain in the most severe surgical operations, and in obsteric cases, by the inhalation of the vapor of sulphuric ether. It is alleged also that the pain, destroying agent is innocent, producing no injurious consequences to the patient inhaling it. If this be true, and it be indeed a discovery, its national importance, its importance to the human race, is manifest.

Intense pain is regarded by mankind, generally, as so serious an evil that it would have been strange indeed if efforts had not been early made to diminish this species of suffering. The use of the juice of the poppy, henbane, mandragora, and other narcotic preparations, to effect this object by their deadening influence, may be traced back till it disappears in the darkness of a highly remote antiquity. Intoxicating vapors were also employed, by way of inhalation, to produce the same effects as drugs of this nature introduced into the stomach. This appears from the account given by Herodotus, of the practice of the Scythians, several centuries before Christ, of using the vapor of hemp seed as a means of drunkenness. The known means of stupefaction were very early resorted to, in order to counteract pain produced by artificial causes. In executions, under the horrible form of crucifixion, soporific mixtures were administered to alleviate the pangs of the victim. The draught of vinegar and gall, or myrrh, offered to the Savior in his agony, was the ordinary tribute of human sympathy extorted from the bystander by the spectacle of intolerable anguish.

That some lcthean anodyne might be found to assuage the torment of surgical operations as they were anciently performed, cauterizing the

* Magnetic Telegraph, &c.

cut surfaces, instead of tying the arteries, was not only a favorite notion, but it had been in some degree, however imperfect, reduced to practice. Pliny, the naturalist, who perished in the eruption of Vesuvius, which entombed the city of Herculaneum, in the year 79, bears distinct and decided testimony to this fact.

"It has a soporific power," says he in his description of the plant known as the mandragora or circeius—"It has a soporific power on the faculties of those who drink it. The ordinary potion is half a cup. It is drunk against serpents, and *before cuttings and puncturings*, lest they should be felt." (*Bibitur et contra serpentes, et ante sectiones, punctionesque, ne sentiāntur.*)

When he comes to speak of the plant *eruca*, called by us the rocket, he informs us that its seeds, when drank, infused in wine, by criminals about to undergo the lash, produce a certain callousness or induration of feeling, (*duritiam quondam contra sensum induere.*)

Pliny also asserts that the stone *Memphitis*, powdered and applied in a liniment with vinegar, will stupefy parts to be cut or cauterized, "for it so paralyzes the part that it feels no pain; *nec sentit cruciatum.*"

Dioscorides, a Greek physician of Cilicia, in Asia, who was born about the time of Pliny's death, and who wrote an extensive work on the materia medica, observes, in his chapter on mandragora—

1. "Some boil down the roots in wine to a third part, and preserve the juice thus procured, and give one cyathus of it in sleeplessness and severe pains, of whatever part; also, *to cause the insensibility*—to produce the anesthesia (*poiein anaesthesia*) of those who are to be cut or cauterized."

2. "There is prepared, also, besides the decoction, a wine from the bark of the root, three minae being thrown into a cask of sweet wine, and of this three cyathi are given *to those who are to be cut or cauterized, as aforesaid*; for being thrown into a deep sleep, *they do not perceive pain.*"

3. Speaking of another variety of mandragora, called *morion*, he observes, "medical men use it also for those who are to be cut or cauterized."

Dioscorides also describes the stone *Memphitis*, mentioned by Pliny, and says that when it is powdered and applied to parts to be cut or cauterized, they are rendered, *without the slightest danger*, wholly insensible to pain. Matthiolus, the commentator on Dioscorides, confirms his statement of the virtues of mandragora, which is repeated by Dodoneus. "Wine in which the roots of mandragora has been steeped," says this latter writer, "brings on sleep, and appeases all pains, so that it is given to those who are to be cut, sawed, or burned, in any parts of their body, that they may not perceive pain."

The expressions used by Apuleius, of Madaura, who flourished about a century after Pliny, are still more remarkable than those already quoted from the older authors. He says, when treating of mandragora, "If any one is to have a member mutilated, burned, or sawed, (*mutilandum, comburendum, vel serrandum,*) let him drink half an ounce with wine, and let him sleep till the member is cut away, without any pain or sensation, (*et tantum dormiet, quousque abscindatur membrum aliquo sine dolore et sensu.*")

It was not in Europe and in Western Asia alone, that these early efforts to discover some letheon were made, and attended with partial suc-

cess. On the opposite side of the continent, the Chinese, who have anticipated the Europeans in so many important inventions, as in gunpowder, the mariner's compass, printing, lithography, paper money, and the use of coal, seem to have been quite as far in advance of the occidental world, in medical science. They understood, ages before they were introduced into christianity, the use of substances containing iodine for the cure of the goitre, and employed spurred rye, ergot, to shorten dangerously prolonged labor in difficult accouchments. Among the therapeutic methods confirmed by the experience of thousands of years, the records of which they have preserved with religious veneration, the employment of an anæsthetic agent to paralyze the nervous sensibility before performing surgical operations, is distinctly set forth. Among a considerable number of Chinese works on the pharmacopœia, medicine, and surgery, in the National Library at Paris, is one entitled *Kou-kin-i-tong*, or general collection of ancient and modern medicine, in fifty volumes quarto. Several hundred biographical notices of the most distinguished physicians in China are prefixed to this work. The following curious passages occur in the sketch of the biography of *Hoa-tho*, who flourished under the dynasty of *Wei*, between the years 220 and 230 of our era. "When he determined that it was necessary to employ acupuncture, he applied it in two or three places; and so with the *moxa*, if that was indicated by the nature of the affection to be treated. But if the disease resided in parts upon which the needle, the *moxa*, or liquid medicaments could not operate, for example, in the bones, or the marrow of the bones, in the stomach, or the intestines, he gave the patient a preparation of hemp, (in the Chinese language *mayo*,) and after a few moments, he became as insensible as if he had been drunk or dead. Then, as the case required, he performed operations, incisions, or amputations, and removed the cause of the malady, then he brought together and secured the tissues, and applied liniments. After a certain number of days, the patient recovered, *without having experienced during the operation the slightest pain*. *Hoa-tho* has published, under the title of *Nei-tchao-thou*, anatomical plates, which exhibit the interior of the human body, which have come down to our times, and enjoy a great reputation."

It will be noticed that the agent employed by *Hoa-tho*, which he calls *ma-yo*, hemp medicine, and which is called in the annals of the later *Hans*, *mafo-san*, or hemp essence powder, is the extract of the same plant mentioned by Herodotus, twenty-three centuries ago, the *canuabis Indica*, the *haschisch* of the Arabs, which is now extensively cultivated in Hindostan, for the purpose of manufacturing the substance called *Bhang*, to produce a peculiar species of intoxication, at first seductive and delicious, but followed in its habitual use by terrible effects upon the constitution.

Almost a thousand years after the date of the unmistakable phrases quoted from Apuleius, according to the testimony of William of Tyre, and other chroniclers of the wars for the rescue of the holy sepulchre, and the fascinating narrative of *Marco Polo*, a state of anæsthesia was induced for very different purposes. It became an instrument in the hands of bold and crafty imposters to perpetrate and extend the most terrible fanaticism that the world has ever seen.

The employment of anæsthetic agents in surgical operations, was not forgotten or abandoned during the period when they were pressed into

the appalling service just described. In the thirteenth century, anæsthesia was produced by inhalation of an anodyne vapor, in a mode oddly forestalling the practices of the present day, which is thus described in the following passage of the surgical treatise of Theodoric, who died in 1298. It is the receipt for the "spongia somnifera," as it is called in the rubric:

"The preparation of a scent for performing surgical operations, according to Master Hugo. It is made thus: Take of opium and the juice of unripe mulberry, of hyoscyamus, of the juice of the hemlock, of the juice of the leaves of the mandragora, of the juice of the woody ivy, of the juice of the forest mulberry, of the seeds of lettuce, of the seed of the burdock, which has large and round apples, and of the water hemlock, each one ounce; mix the whole of these together in a brazen vessel, and then in it place a new sponge, and let the whole boil, and as long as the sun on the dog days, till it (the sponge) consumes it all, and let it be boiled away in it. As often as there is need of it, place this same sponge into warm water for one hour, and let it be applied to the nostrils till he who is to be operated on, (*qui incidendus est*,) has fallen asleep; and in this state let the operation be performed, (*et sic fiat chirurgia*.) When this is finished, in order to rouse him, place another dipped in vinegar, frequently to his nose, or let the juice of the roots of fenigreek be squirted into his nostrils. Presently he awakens."

A French physieian, residing in the neighborhood of Toulouse, M. Dauriol, asserts that, in the year 1832, he employed a method analogous to that of Theodoric, and specifies five cases in which he succeeded in performing painless operations.

September 23, 1828, M. Girardin read a letter before the Academy of Medicine, addressed to his Majesty Charles X, by Mr. Hickman, a surgeon of London, in which this surgeon announces a means of performing the most delicate and most dangerous operations, without producing pain in the individuals submitted to them. This proceeding consists in suspending insensibility by the methodical introduction of certain gases into the lungs. Mr. Hickman had tested his proceedings by repeated experiments on animals.

Guy de Chauliac and Brunus, are the only authors on medicine and surgery, besides Theodoric, who, during this period, allude to prophylactic agents to avert pain. It may be presumed, therefore, that their employment was not generally very successful. Probably bad effects, such as congestion and asphyxia, and sometimes ending in death, followed their unskillful empiricism. J. Cannappe, the physician of Francis I, in his work printed at Lyons in 1532, *Le Guidon pour les Barbiers et les Chirurgiens*, the Surgeon's and Barber's Guide, describes the method of Theodoric and his followers, as already given above, and adds: "*Les autres donnent opium à borie, et font mal, specialement s'il est jeune; et le aperçoivent, car ee est avec une grande bataille de vertu animale et naturelle. J'ai ouï qu'ilz encourent manie, et par consequent la mort.*"

Thus far had the superinduction of anæsthesia, as a preventive of pain, made its way into surgical practice in the middle ages; and even then it must have been most beneficial in its influence in diminishing the mass of human suffering. Down to the time when Ambrose Paré, in the sixteenth century, suggested the application of slender ligatures to

bleeding arteries, to arrest the hemorrhage of surgical wounds, no other means were employed to stem the flow of blood after capital operations, than by scorching over the raw surface with a red hot iron, or plunging it into boiling pitch, or applying other strong potential cauteries. "The horrors of the patient, and his ungovernable cries, the hurry of the operators and assistants, the sparkling of the (heated) irons, and the hissing of the blood against them, must have made terrible scenes," says Mr. John Bell; "and surgery must, in those days, have been a horrible trade."

Haller, Deneux, and Blandin, report cases of operations performed upon patients, under the influence of alcoholic intoxication, in obstetric and other cases, without pain; and Richerand has suggested that this expedient should be employed in the management of dislocations difficult to be reduced. For obvious reasons it has not been adopted by the profession. Mesmerism, also, has been the subject of grave discussions, and of some extraordinary statements, in this connexion; but, whatever may be thought of the individual cases certified by witnesses, it is not too much to say that it is not likely ever to become a remedy of general application.

Opium has in all ages been employed to assuage pain. Van Helmont calls it the specific gift of the Creator. Guy de Chauliac used it, and many surgeons have followed his example in their operations. Sassard, surgeon of the hospital *de la Charité*, strongly recommended this practice in the last century. But the irregular action of opium, the excitability which it sometimes occasions, its bad effects upon the digestive organs and the nervous system, and the length of time during which its influence remains, are decisive objections to this agent. Dr. Esdaille has recently experimented upon this subject at Calcutta, but the results are altogether unfavorable.

Van Frieten, Juvet, and Teden, have advised that mechanical compression should be employed to prevent pain in amputations, but this expedient proved but partially effectual, and has serious inconveniences which require it to be rejected without question.

The application of ice also will diminish pain under these circumstances. Baron Larry, after the battle of Eylau, found a remarkable insensibility in the wounded who suffered amputations, owing to the intense cold. The injury to the general health of the patient is not, however, compensated by the imperfect and uncertain success of this remedy.

After the great improvement brought about by the introduction of ligatures, the inducement to seek for a safe and effectual nepenthe, though still great, was vastly less than before. No practical advance deserving to be mentioned was made in this direction until the great discovery of the available effects of sulphuric ether.

This substance had been known since the thirteenth century. Its formation was accurately described by Valerius Cordus in the sixteenth century. Frobenius first designated it ether, and published an account of it in the philosophical transactions in 1730.

Its use as a medical agent, first alluded to by Valerius Cordus, and mentioned by Hoffman, Cullen, Alston, Lewis, and Monroe, and other writers of the last century, has long been familiarly known. The history of its use by inhalation commenced with the pamphlet published in 1795, by Richard Pearson; and several communications from the same Dr. Pearson are to be found in the work of Dr. Beddoes on Facti-

tious Airs, published at Bristol, England, in 1796. The same work contains a letter from one of Dr. Thornton's patients, giving an account of his use of ether, by Dr. Thornton's advice, in a case of pectoral catarrh. He says, "it gave almost immediate relief both to the oppression *and pain* in the chest." On the second trial he inhaled two spoonsfull, with "immediate relief as before, and I very soon after *fell asleep*." In 1815, Nysten, in the Dictionary of Medical Sciences, speaks of the inhalation of ether as familiarly known for *mitigating pains* in colic. For the last fifty years most therapeutic authors mention its use by inhalation in asthma, &c., as Duncan, Murray, Brande, Christison, Pereira, Thompson, Barbier, Wendt, Vogt, Sundelin, &c. Effects analogous to intoxication, when ether is inhaled, are stated by American authors. as Godman, (1822,) Mitchel, (1832,) Professor Samuel Jackson, (1833,) Wood & Bache, (1834,) Miller, (1846, and early in that year.)

Dr. John C. Warren, in his work on Etherization, says: "The general properties of ether have been known for more than a century, and the effect of its inhalation, in producing exhilaration and insensibility, has been understood for many years, not only by the scientific, but by young men in colleges and schools, and in the shop of the apothecary, who have frequently employed it for these purposes."

About a half a century since, Sir Humphrey Davy, who had acted as an assistant to Dr. Beddoes, in the commencement of his career, suggested the possibility that a pain-subduing gas might be inhaled, as follows: "As *nitrous oxide*, in its extensive operation, appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place." *Researches on Nitrous Oxide*, p. 556. Upon this hint, Dr. Horace Wells, of Hartford, Connecticut, in the autumn of the year 1844, experimented with *nitrous oxide gas*, in the extraction of teeth; but this gas being found on trial to be unavailable for the desired purposes, he abandoned his experiments in December, 1844, and tried none afterwards.

Late in the autumn of 1844, Dr. F. E. Marcy, of Hartford, Conn., as appears from his own affidavit and that of F. C. Goodrich, of Hartford, suggested to Dr. Wells to substitute sulphuric ether for nitrous oxide, and informed him of its known effects, and how to make it. Marcy "administered the vapor of rectified sulphuric ether in my [his] office to a young man; * * * and after he had been rendered insensible to pain, cut from his head an encysted tumor of about the size of an English walnut. The operation was entirely unattended with pain." Dr. Marcy concluded that nitrous oxide was more safe, equally efficacious, and more easily administered than ether, and therefore to be preferred, and retained that opinion to December, 1849.

Dr. E. R. Smilie, of Boston, in October, 1846, asserted that he had employed successfully an *etherial* tincture of opium to subdue pain under the knife. He states that he applied this tincture by inhalation in the spring of 1844; that he opened a serious abscess on the neck of the late Mr. John Johnson, while he was rendered unconscious of pain from the operation by this tincture.

The Paris Medical Gazette, of March, 1846, gives an account of remarkable experiments performed by M. Ducos, by ether, on animals, exhibiting most of the phenomena since witnessed in the human body. Sir Benjamin Brodie tried it on Guinea pigs, whom it put to sleep and killed. He doubted its safety.

Notwithstanding this long series of efforts to procure a true nepenthe, the object still seemed unattainable to the wisest and boldest members of the surgical profession. Velpeau, than whom no higher authority can be quoted, said, in 1839, "to avoid pain in surgical operations is a chimera which it is not allowable to pursue at the present day. The cutting instrument, and pain, in operative medicine, are two words which never present themselves singly to the mind of the patient, and of which we must necessarily admit the association." Orfila, in his Toxicology, declares absolute insensibility to pain under surgical operations by etherization, to be a discovery entirely new. Dr. J. C. Warren says, "The discovery of a mode of preventing pain in surgical operations has been an object of strong desire among surgeons from an early period. In my surgical lectures I have almost annually alluded to it, and stated the means which I have usually adopted for the attainment of the object. I have also freely declared that, notwithstanding the use of very large doses of narcotic substances, this desideratum had never been satisfactorily obtained. The successful use of any article of the materia medica for this purpose, would therefore be hailed by me as an alleviation of human suffering." Finally, Sir Benjamin Brodie, in a discourse at St. George's Hospital, at so late a date as October 1, 1846, alluding to mesmerism, said, "There is no greater desideratum, either in medicine or surgery, than to have the means of allaying or preventing bodily pain, not only in surgical operations, but in other cases also, but there is good reason to apprehend that it has not been reserved for the revival of animal magnetism under a new name, to accomplish that *for which all physicians and surgeons have been looking in vain, from the days of Hippocrates down to the present time.*" Testimonials like these might be multiplied indefinitely, but the names already quoted are of those universally recognized on both continents as the most illustrious cultivators of medical science. The desideratum of which Brodie despaired on the 1st of October, 1846, had been found, and its efficacy demonstrated within the twenty-four hours preceding the delivery of his lecture. And in a few days after, the tidings were borne with the full speed of steam across the Atlantic, and dispersed over Europe and Asia, which for two thousand years had been looking for it in vain.

This sketch of the progress of human knowledge as to the inhalation of sulphuric ether and its effects, and as to attempts to superinduce anæsthesia by various agents in ancient and modern times, though by no means scientifically complete, is sufficiently so for the purpose for which your committee have introduced it, to show what was and what was not known upon the subject previously to the investigations and experiments of this memorialist.

Your committee are satisfied, upon a full and careful examination of all the evidence before them, that until the 30th of September, 1846, it was not known that sulphuric ether might safely be inhaled in sufficient quantity to produce total insensibility to pain under the severest surgical operations. The safety of this agent, its certainty, its efficiency, are now established beyond question, and acknowledged by the whole scientific world. This great discovery, by far the noblest contribution which medical science has made to humanity within the present century, and with which, looking through all ages, no other except that of Jenner can take rank, sprung to light in the year 1846, in the State of Massachusetts; and the memorialist, Dr. Wm. T. G. Morton, claims it as his own.

Certain it is, he was the first who exhibited it to the world, and the only one who publicly used or claimed it, until after its reality and efficacy had been fully established. The honor of the discovery, therefore, must be awarded to him, unless some one show, by satisfactory evidence, an older and a better title. From the 30th of September, 1846, until the 2d day of January, 1847, during which time this discovery passed successfully, the *experimentum crucis*, Dr. Morton was in full, and sole, and undisputed possession. For a time, he held the operative agent as a secret, but at last disclosed it, by letter, to the faculty of the Medical Hospital at Boston, with a view to its trial, in what is called in surgery a *capital case*. It was not until some time after this trial had been made, and proved successful, that a claim was publicly set up by any one to the honor or a share in the honor of the discovery.

The account given by Dr. Morton of the circumstances which directed his mind to the investigation, is simple and natural, and in every step corroborated by some marked circumstance, proved by the testimony of one or more disinterested witnesses. A narrative such as his, so supported, goes far to sustain the title which possession, undisputed for a time, would have given him. It was prepared by him, and presented to the Academy of Arts and Sciences at Paris, by M. Arago, in July, 1847. Notwithstanding its length, we have thought proper to insert it entire.

“MEMOIR.

“In the summer of 1844, being in the practice of dentistry, and desirous to improve myself in chemical and medical knowledge, I studied in the office of Dr. Charles T. Jackson, of Boston, and, in order to employ my time to the utmost advantage, I resided in his family. One day, in casual conversation upon my profession of dentistry, I spoke of the operation of destroying the nerve of a tooth, and remarked that there was always doubt whether the tooth could be restored to usefulness, inasmuch as the arsenic produced an irritation, and left a soreness often permanent. Dr. Jackson said, in a humorous manner, that I must try some of his tooth-ache drops, and proceeded to tell me that, at a time when he practised medicine, he occasionally extracted teeth for particular patients, and that in one instance a patient who could not summon courage for the operation asked him to apply something to alleviate the pain. He applied ether, and with success, for a few days afterwards a friend of this patient called to obtain some of the ‘tooth-ache drops,’ as he called them; but Dr. Jackson, not wishing to be troubled with dental business, told him he had none. Dr. Jackson then added, that as this ether might be applied with advantage to sensitive teeth, he would send me some. The conversation then turned upon the effect of ether upon the system, and he told me how the students at Cambridge used to inhale sulphuric ether from their handkerchiefs, and that it intoxicated them, making them reel and stagger. He gave no further intimation of the effect of ether, or of the manner of applying it. I may add that Dr. Jackson has confirmed my account of this conversation in his own statement to Dr. Gould.

“In a few days after this conversation, Dr. Jackson sent me a bottle of chloric ether, highly rectified, as he had offered. At the same time he sent a bottle to two other dentists of high respectability in Boston. I made an experiment with this ether in destroying the sensibility of a

valuable tooth of a patient, Miss ——, by direct application, telling her that the operation would be slow. I was obliged to apply it several times, but in the end the sensibility seemed to be removed, and the tooth is now, to my knowledge, in a useful condition.

"About this time the wife and aunt of Dr. Jackson were under my treatment for dental purposes, and it was necessary to extract teeth in each case, the operation being painful and the ladies showing an unusual degree of sensitiveness. The last named lady, in particular, before the extracting of each tooth, remained several hours in the operating chair, unable to summon courage to endure the operation, and begging to be mesmerized, or that I would give her something to make her insensible. Dr. Jackson was present and made efforts to encourage the lady, but did not suggest any mode of producing insensibility. *His suggestions had not gone beyond the direct application of ether, in the same manner that laudanum and other narcotics have always been applied to sensitive teeth.*

"The successful application I had made of the ether in destroying the sensibility of a tooth, together with what Dr. Jackson told me of its effects when inhaled by the students at college, awakened my attention, and having free access to Dr. Jackson's books, I began to read on the subject of its effects upon the animal system. I became satisfied that there was nothing new or particularly dangerous in the inhaling of ether, that it had long been the toy of professors and students, known as a powerful anti-spasmodic, anodyne, and narcotic, capable of intoxicating and stupefying, when taken in sufficient quantity. I found that even the apparatus for inhaling it was described in some treatises, but in most cases it was described as inhaled from a saturated sponge or handkerchief. Having some of the ether left which Dr. Jackson had sent me, I inhaled it from a handkerchief, but there was not enough to produce a greater effect than exhilaration followed by headache.

"While investigating this subject I was taken quite ill, and it being the middle of summer, I was advised by my physician to go into the country. I took with me from Dr. Jackson's library, and obtained in other ways, several books treating on this and other subjects. I spent two months at the residence of my father-in-law, in Connecticut. While there I procured ether from the druggist's, and made experiments upon birds and other animals, endeavoring to get them under the effect of inhalation from it. These experiments produced no satisfactory result, and they being known among my friends, I was mortified and vexed, and bottled up the subjects, where they remain to this day.

"In the autumn I returned to Boston, and finding that my business, owing to its interruption, required my constant attention, I was not able to pursue the investigation at that time.

"In the course of the winter (1844-5) Dr. Horace Wells, of Hartford, Conn., a dentist, and formerly my partner, came to Boston, and desired me to aid him in procuring an opportunity to administer the nitrous oxide gas, which he said he believed would destroy or greatly alleviate pain under surgical operations. I readily consented, and introduced him to Dr. George Hayward, an eminent surgeon, who offered to permit the experiment, but as the earliest operation was not to be performed under two or three days, we did not wait for it, but went to Dr. Warren, whom we found engaged with his class. He told us that his students were prepa-

ring to inhale it that evening; for sport, and offered to announce the proposal to them, and ask them to meet us at the college. In the evening Dr. Wells and myself went to the hall, and I took my instruments. Dr. Wells administered the gas, and extracted a tooth, but the patient screamed from pain, and the spectators laughed and hissed. The meeting broke up, and we were looked upon as having made ourselves very ridiculous. I saw nothing more of Dr. Wells, but he left my instruments at my office very early the next morning, and went directly home. In July, being again in Connecticut, I called on Dr. Wells, and we spent some time in adjusting our former partnership accounts. He had then given up dentistry, and was engaged in conducting an exhibition of birds, which he said insured him better health. I went with him to the office of Dr. Riggs, where I spoke of the gas, and asked them to give some to me; but Dr. Wells gave me to understand that he had abandoned the experiment, thinking it could have no practical value.

"In the autumn of 1845, I returned to my business, which had now become almost exclusively mechanical dentistry, or plate work, requiring me often to extract a great number of teeth at a time. Many of my patients suffered extremely, and some were obliged, as is the experience of every dentist, to postpone or abandon the supplying full sets of teeth. I had, therefore, everything to call my attention to the destroying or mitigating of pain under these operations, and great motive to induce me to follow up the subject. Finding that when closed up in a hollow tooth, and sealed with wax, ether would gradually destroy the sensibility of the part, I reasoned that perhaps when inhaled it might destroy or greatly alleviate sensibility to pain generally.

"In the spring of 1846, Thomas R. Spear came to study with me, and hearing me converse upon the subject, he said he had inhaled ether at the Lexington Academy, where he was educated, and described to me its effects. This increased my interest in the subject, and I determined, as soon as the pressure of the spring business was over, to devote myself to it. In the mean time I tried an experiment upon a water spaniel, inserting his head in a jar having sulphuric ether at the bottom. This was done in the presence of two persons at my house in West Needham, where I reside during the summer months. After breathing the vapor for some time, the dog completely wilted down in my hands. I then removed the jar. In about three minutes he aroused, yelled loudly, and sprang some ten feet into a pond of water.

"Immediately after this experiment, I waited on Dr. Granville G. Hayden, a young dentist, told him my purpose, and made an agreement with him to come to my office and take charge of my business, that I might devote myself more exclusively to this subject. The agreement was drawn by R. H. Dana, Jr. Esq., to whose letter in the appendix I take the liberty to refer the Academy in this connexion. As soon as Dr. Hayden became acquainted with my business, I began to devote myself to my experiments. I inhaled some chloric ether and morphine, the effect of which was drowsiness followed by lassitude and headache.

"Early in August I asked Dr. Hayden to procure me a four-ounce phial of sulphuric ether from Mr. Burnett; a druggist much relied upon by chemists. He did so, and I tried to induce him to take it. As he declined, I took half of it into the country to try again upon my dog. Just as I had got it ready, the dog sprang and threw over the jar. I felt

vexed, and resolved to take it myself, and did so, the next day, at my office. I inhaled from my handkerchief all the ether that was left, but was not completely lost, yet thought myself so far insensible that I believed that a tooth could have been drawn with but little pain or consciousness. I was unwilling to send to Burnett's again for the same article, he being a near neighbor, and his young men well acquainted with mine, lest the knowledge of my experiments should get abroad. I accordingly sent a student, William P. Leavitt, to druggists in a different part of the city, Brewers, Stevens and Co., a firm in excellent standing, with directions to get sulphuric ether. After some persuasion I induced Spear, who had taken it at school, to inhale it. He did so, and became so far insensible as to drop the handkerchief, and seemed very drowsy and torpid. As this passed off he became excited and furious, so that he had to be held down in the chair; but this subsided, and on coming to he expressed himself delighted with his sensations. Leavitt then took it, with much the same effect. I was much discouraged by these attempts. The effects produced were not such as I sought for, nor were the young men affected in the same manner that I had been, and as I observed the dog to be. They were much more excited and less insensible. Yet I cannot help remarking, in this connexion, that had this sulphuric ether been pure and highly rectified, I should have demonstrated its effects then, instead of at the subsequent period in September. This ether has since been analyzed, as appears by the affidavits in the appendix, and found to contain a large portion of alcohol, sulphur acids, and other impurities.

"This experiment was early in August; and it being hot weather, and I being somewhat out of health, I went into the country, and abandoned the experiments until the middle of September. With the autumn and the restoration of health, my ambition led me to resume my experiments; and I mentioned to Dr. Hayden that I feared there was so much difference in the qualities of ether, that in so delicate a matter there would be great difficulty in bringing about any generally useful and reliable results.

"Thinking that a surer effect might be produced by inhaling the ether through some apparatus, I called repeatedly on Mr. Wightman, a philosophical instrument-maker, for the purpose of procuring or contriving an apparatus. While examining his bags for inhaling nitrous oxide gas, the thought struck me that I could put the ether into one of these, and by making an opening to be closed by a valve, for the admission of atmospheric air, could convert it into an inhaling apparatus. Upon second thought I had an impression that ether would dissolve India rubber, and put the question to Mr. Wightman. He thought it would. I then put the same question as to oil silk. He said he did not know, but advised me to consult a chemist, and named Dr. Jackson. I took from Mr. Wightman a glass tunnel, purchased an India rubber bag on my way, and returned to my office. I then sent Leavitt to Dr. Gay, a chemist, to ask the simple question whether ether would dissolve India rubber. He returned, saying that Dr. Gay was not in. In the meantime I became satisfied that the bottle and glass I had were not large enough for my purposes, and not wishing to go to unnecessary expense, I said to Dr. Hayden that I would borrow a gas-bag from Dr. Jackson's laboratory. He then suggested to me to ascertain from Dr. Jackson some-

thing as to the different qualities and preparations of ether, with which he said chemists were always familiar. I approved of the suggestion, but feared Dr. Jackson might guess what I was experimenting upon, and forestall me. I went to Dr. Jackson's, therefore, to procure a gas-bag, also with the intention of ascertaining something more accurately as to the different preparations of ether, if I should find I could do so without setting him upon the same track of experiment with myself. I am aware that by this admission I may show myself not to have been possessed by the most disinterested spirit of philosophic enthusiasm, clear of all regard for personal rights or benefits; but it is enough for me to say that I felt I had made sacrifices and run risks for this object, that I believed myself to be close upon it, yet where another, with better opportunities for experimenting, availing himself of my hints and labors, might take the prize from my grasp.

"I asked Dr. Jackson for his gas-bag. He told me it was in his house. I went for it, and returned through the laboratory. He said, in a laughing manner, 'Well, Doctor, you seem to be all equipped, minus the gas.' I replied, in the same manner, that perhaps there would be no need of having any gas, if the person who took it could only be made to believe there was gas in it, and alluded to the story of the man who died from being made to believe that he was bleeding to death, there being in fact nothing but water trickled upon his leg; but I had no intention whatever of trying such a trick. He smiled and said that was a good story, but added, in a graver manner, that I had better not attempt such an experiment, lest I should be set down as a greater humbug than Wells was with his nitrous oxide gas. Seeing that here was an opportunity to open the subject, I said, in as careless a manner as I could assume, why cannot I give the ether gas? He said that I could do so, and spoke again of the students taking it at Cambridge. He said the patient would be dull and stupefied, that I could do what I pleased with him, that he would not be able to help himself. Finding the subject open, I made the inquiries I wished as to the different kinds and preparations of ether. He told me something about the preparations, and thinking that if he had any it would be of the purest kind, I asked him to let me see his. He did so, but remarked that it had been standing for some time, and told me that I could get some highly rectified at Burnett's. As I was passing out, Dr. Jackson followed me to the door, and told me that he could recommend something better than the gas-bag to administer the ether with, and gave me a flask with a glass tube inserted in it.

"I procured the ether from Burnett's, and taking the tube and flask, shut myself up in my room, seated in the operating chair, and commenced inhaling. I found the ether so strong that it partially suffocated me, but produced a decided effect. I then saturated my handkerchief and inhaled it from that. I looked at my watch and soon lost consciousness. As I recovered, I felt a numbness in my limbs, with a sensation like nightmare, and would have given the world for some one to come and arouse me. I thought for a moment I should die in that state, and that the world would only pity or ridicule my folly. At length I felt a slight tingling of the blood in the end of my third finger, and made an effort to touch it with my thumb, but without success. At a second effort, I touched it, but there seemed to be no sensation. I gradually raised my arm and pinched my thigh, but I could see that sensation was imperfect.

I attempted to rise from my chair, but fell back. Gradually I regained power over my limbs and full consciousness. I immediately looked at my watch, and found that I had been insensible between seven and eight minutes.

"Delighted with the success of this experiment, I immediately announced the result to the persons employed in my establishment, and waited impatiently for some one upon whom I could make a fuller trial. Toward evening, a man, residing in Boston, whose certificate is in the appendix, came in, suffering great pain, and wishing to have a tooth extracted. He was afraid of the operation, and asked if he could be mesmerized. I told him I had something better, and saturating my handkerchief, gave it to him to inhale. He became unconscious almost immediately. It was dark, and Dr. Hayden held the lamp, while I extracted a firmly rooted bicuspid tooth. There was not much alteration in the pulse, and no relaxation of the muscles. He recovered in a minute, and knew nothing of what had been done to him. He remained for some time talking about the experiment, and I took from him a certificate. This was on the 30th of September, 1846. This I consider to be the first demonstration of this new fact in science. I have heard of no one who can prove an earlier demonstration. If any one can do so, I yield to him the point of priority in time.

"I will make a single remark upon the subject of my interview with Dr. Jackson. It is not necessary to go into the question of the origin of all ideas. I am ready to acknowledge my indebtedness to men and to books for all my information upon this subject. I have got here a little and there a little. I learned from Dr. Jackson, in 1844, the effect of ether directly applied to a sensitive tooth, and proved, by experiment, that it would gradually render the nerve insensible. I learned from Dr. Jackson, also, in 1844, the effect of ether when inhaled by the students at college, which was corroborated by Spear's account, and by what I read. I knew of Dr. Wells's attempt to apply nitrous oxide gas for destroying pain under surgical operations. I had great motives to destroy or alleviate pain under my operations, and endeavored to produce such a result by means of inhaling ether, inferring that if it would render a nerve insensible, directly applied, it might, when inhaled, destroy or greatly alleviate sensibility to pain generally. Had the ether that I tried on the 5th August been pure, I should have made the demonstration then. I further acknowledge that I was subsequently indebted to Dr. Jackson for valuable information as to the kinds and preparations of ether, and for the recommendation of the highly rectified from Burnett's as the most safe and efficient. But my obligation to him hath this extent, no further. All that he communicated to me I could have got from other well-informed chemists, or from some books. He did not put me upon the experiments; and when he recommended the highly rectified sulphuric ether, *the effect he anticipated was only that stupefaction which was not unknown, and he did not intimate in any degree a suspicion of that insensibility to pain which was demonstrated, and astonished the scientific world.*

"As soon as the man whose tooth I extracted left my office, I consulted Dr. Hayden as to the best mode of bringing out the discovery. We agreed it was best to announce it to the surgeons at the hospital; but as some time would elapse before an operation, I thought it best to pro-

eure some assurance which would induce my patients to take it. therefore called upon the man who had taken it, and found him perfectly well. Thence I went to Dr. Jackson, told him what I had done, and asked him to give me a certificate that it was harmless in its effects. This he positively refused to do. I then told him I should go to the principal surgeons and have the question thoroughly tried. *I then called on Dr. Warren, who promised me an early opportunity to try the experiment, and soon after I received the invitation inserted in the appendix.*

"In the mean time, I made several additional experiments in my office, with various success. I administered it to a boy, but it produced no other effect than sickness, with vomiting, and the boy was taken home in a coach, and pronounced by a physician to be poisoned. His friends were excited, and threatened proceedings against me. A notice of my successful experiment having, without my knowledge, got into the papers, several persons called, wishing to have it administered. I gave it to a lady, but it produced no other effect than drowsiness, and when breathed through the apparatus named by Dr. Jackson, it produced suffocation. I was obliged to abandon this mode, and obtaining from Mr. Wightman a conical glass tube, I inserted a saturated sponge in the larger end, and she breathed through that. In this way she seemed to be in an unnatural state, but continued talking, and refused to have the tooth extracted. I made her some trifling offer, to which she assented, and I drew the tooth, without any indication of pain on her part, not a muscle moving. Her pulse was at 90, her face much flushed, and after coming to, she remained a long time excessively drowsy. From this experiment, I became satisfied of what is now well proved, that consciousness will sometimes remain after insensibility to pain is removed.

"I afterwards gave it to a Miss L., a lady of about twenty-five. The effect upon her was rather alarming. She sprang up from the chair, leaped into the air, screamed, and was held down with difficulty. When she came to, she was unconscious of what had passed, but was willing to have it administered again, which I did with perfect success, extracting two molar teeth. After this, I tried several other experiments, some with more and some with less success, giving my principal attention to the perfecting of my modes of administering it.

"When the time drew near for the experiment at the hospital, I became exceedingly anxious, and gave all my time, day and night, hardly sleeping or eating, to the contriving of apparatus, and general investigation of the subject.

"I called on Dr. Gould, a physician who has paid much attention to chemistry, and told him my anxieties and difficulties. He sympathized with me, gave me his attention, and we sat up nearly all night making sketches of apparatus; he first suggesting to me an antidote in case of unfavorable effects, and the valvular system, instead of the one I then used. The operation was to be at 10 o'clock. I rose at daybreak, went to Mr. Chamberlain, an instrument-maker, and, by great urging, got the apparatus done just after ten o'clock, hurried to the hospital, and reached the room just as Dr. Warren was about to begin the operation; he having given up all hope of my coming. The detailed account of this operation will be found in Dr. Warren's communication. There was a full attendance; the interest excited was intense, with the most eager scrutiny of the patient. When the operation closed, the

patient described his state, and Dr. Warren announced his belief that there had been insensibility to pain, my feelings may be better imagined than described.

"I was invited to administer it the next day, in an operation for a tumor, performed by Dr. Hayward, and with perfect success.

"On the 23d October, I saw Dr. Jackson for the first time since the interview last described. I take my account of this interview from a memorandum made at the time, the accuracy of which is attested by two witnesses of the highest respectability who were present. He said he thought he would just look in, that he heard I was doing well with the ether, and learned from Mr. Eddy that I intended to take out a patent, and would make a good deal by it. I replied that it had been a cause of anxiety and expense to me, but that I thought I should now do well with it. He said he thought so too, and that he believed he must make me a professional charge for advice. I asked him why in this case, more than in any other case of his advice, arising out of our previous relations, as mentioned at the opening of this memoir. He said that his advice had been useful to me, that I should make a good deal out of the patent, and that I ought to make him a compensation. I told him I would do so if I made much by the patent, independant of what I gained in my business. He then said he should charge me \$500. I told him I would pay him that, if ten per cent. on the nett profits of the patent amounted to so much. He said he was perfectly satisfied with this arrangement, and so the interview ended. The next morning he told Mr. R. H. Eddy what had passed, and two or three days afterwards Mr. Eddy suggested to me that instead of paying Dr. Jackson a fee, I should interest him in the patent, and give him ten per cent. of the nett profits. Mr. Eddy made this suggestion out of friendship to Dr. Jackson, whom he wished to benefit. He added that the patent would thus have the benefit of Dr. Jackson's name and skill; that he would thus have a motive to give his attention to the preparation and the apparatus, and we should be able to keep in advance of the improvements that might be suggested by others. He also said that if a suit was brought, and Dr. Jackson should be a witness, as he doubtless would be, the aid he had given me might be made a handle of by persons impeaching the patent to invalidate my claim as the discoverer. At this time the dentist had organized a formidable opposition to the use of ether, and all the medical magazines in the Union, except Boston, were arrayed against it. I felt the need of all the aid I could get, and was conscious of a want of thorough scientific education myself. I was induced by these motives to accede to Mr. Eddy's request, but did not then understand that Dr. Jackson claimed to be a discoverer at all. But on this head I refer to the affidavits of the Messrs. Eddy.

"I continued administering the ether in my office, and early in November I applied to Dr. Hayward for leave to administer it in a case of amputation, which I learned was to take place at the hospital. Dr. H. J. Bigelow, in the mean time, had attended my experiments at my office, and taking a deep interest in the subject, prepared a memoir, which he read to the Boston Society for Medical Improvement, and subsequently to the American Academy of Arts and Sciences.

"The surgeons of the hospitals informed me that they thought it their duty to decline the use of the preparation until informed what it was.

I immediately wrote to Dr. Warren, the senior surgeon, disclosing the whole matter. The operation took place on the 7th November. About half an hour beforehand, Dr. H. J. Bigelow called for me, and said he wished me to be on the spot, in case it should be determined to admit me. After remaining in the ante-room for some time, it was resolved by the surgeons to permit the experiment, and I administered the ether with perfect success. This was the first amputation. *I will also remark that Dr. Jackson was absent from the city at this time, and knew nothing of the operation.*

On the 21st November, I administered the ether in an operation for a tumor, at the Bromfield House, in the presence of a number of medical gentlemen, among whom I noticed Dr. Jackson. *This was the first time he had seen it administered, and no one but myself had administered it in Boston or elsewhere, to my knowledge. In this instance Dr. Jackson appeared merely as a spectator. On the 2d January, 1847, he did the first act indicating to the surgeons that he had any interest in the subject. On that day he called at the hospital with some oxygen gas as an antidote for asphyxia, which he heard was produced by the ether. But before this time the surgeons had satisfied themselves that asphyxia was not produced. With the single exception of an intimation to Dr. Warren, which was after its establishment at the hospital, and which appears in his communication, none of the surgeons or other persons engaged in these experiments had received any idea from Dr. Jackson himself, or from his conduct, that he was in any way connected with this discovery, responsible for the use of the preparation, entitled to the credit of its success, or liable to the odium of its failure.*

"If death or serious injury had occurred to any one, Dr. Jackson could not have been in the least degree implicated. It was not until danger was over, and success certain, until the discovery had arrested the attention of the world, until the formidable opposition of the dentists and of all the medical magazines and societies in other places had become powerless, that Dr. Jackson began to involve himself in it, and that his claim to have anticipated the effects, and communicated them to me, was brought forward.

"On the 19th October, as soon as I felt confident of success, I addressed a note to my former partner, Dr. Wells, informing him of what I had done, and asking him to come to Boston and assist me in bringing the discovery into use in dentistry. He replied by the letter in the appendix, of October 20, 1846. He came to Boston, saw several experiments in my office, expressed himself alarmed, said I should kill some one yet, and break myself up in my business. He left abruptly, but without intimating a claim to the discovery, although he could recognise the ether, and was freely told that it was ether. *I have also the authority of Dr. Warren and Dr. Hayward for saying that no allusion was made by Dr. Wells to ether, to their knowledge, when he made his experiment in Boston, in 1844-5.*

"I am aware that a communication to an institution whose objects are scientific, and not personal, gives me no right to argue the question of my own claim to a discovery, in opposition to the claims of others. I have endeavored to state no facts but such as fairly illustrate the history of this demonstration. If these have any bearing upon the claims of others, I am entitled to the benefit of the effect. But this memoir is

not intended to present the whole of my comparative rights, as, against the claims of Dr. Jackson or Dr. Wells. If a tribunal were opened for such a discussion, I would most cheerfully prepare for the hearing, and submit myself to the judgment, of any enlightened umpire. I have proposed such a course to Dr. Jackson, who has declined it.

"In justice to myself, I should say, that I took out my patent early, before I realized how extensively useful the discovery would be, and beside the motive of profit and remuneration to myself, I was advised that it would be well to restrain so powerful an agent, which might be employed for the most nefarious purposes. I gave free rights to all charitable institutions, and offered to sell the right to surgeons and physicians for a very small price, such as no one could object to paying, and reasonably to dentists. I had little doubt that the proper authorities would take it out of private hands, if the public good required it, making the discoverer, who had risked reputation, and sacrificed time and money, such a compensation as justice required. But as the use has now become general and almost necessary, I have long since abandoned the sale of rights, and the public use the ether freely; and I believe I am the only person in the world to whom this discovery has, so far, been a pecuniary loss.

"Most respectfully, your obedient servant,
"W. T. G. MORTON.

"Boston, (U. S. A.) July 31, 1847."

This statement brings the discovery down to a time when it became fully established, and when complete publicity was given it by several successful operations under its influence in the Massachusetts Hospital. It is fully supported by Dr. George Hayward, one of the surgeons in the Massachusetts General Hospital, and much in detail, by the testimony of disinterested witnesses. The following is a note from Dr. H. in reference thereto:

"BOSTON, *February* 5th, 1852.

"DEAR SIR: The article by R. H. Dana, jr., Esq., on the ether discovery, (Dr. Morton's Memoir,) which appeared in *Littell's Living Age* for March, 1848, was read to me before it was printed; and to my best knowledge and belief all its statements are correct.

"I remain, very truly yours, &c.,

"GEO. HAYWARD.

"Hon. GEO. T. DAVIS."

It is proved that, prior to 1844, Dr. Morton was associated in practice with Dr. Horace Wells as a surgeon dentist. That afterwards he became a student of medicine with Dr. Charles T. Jackson, and a boarder in his family. That in pursuance of the suggestion of Sir Humphrey Davy, mentioned above, Dr. Wells was experimenting on nitrous oxide, and professed to have been successful in several instances in extracting teeth without pain from patients under its influence. That in the winter of 1844-'5, Dr. Wells came to Boston and desired to make public exhibition of his alleged discovery, when Dr. Morton, as his friend, obtained permission for him to exhibit before a public assembly, and himself assisted on the occasion. The experiment of Dr. Wells proved a failure: he was greatly mortified, and presently abandoned the pursuit.

It is very reasonable to suppose that this attempt of Dr. Wells, although it resulted unfortunately, did, in connexion with his profession and his previous studies, turn the mind of Dr. Morton still more strongly in that direction. He certainly had just reason to hope that, although nitrous oxide would not produce the desired result, he could find some other gas or vapor which would. He was young and ardent—a surgeon dentist with already a large business, and he was condemned to witness daily the excruciating pain occasioned by his more difficult operations, especially when nervous and sensitive females were the subjects. It is natural to suppose that a humane desire to remove so much suffering, and especially a prospect of the enviable reputation and high fortune which should attend such a discovery, caused it to take full possession of his mind.

He was in a situation highly favorable to the progress of his inquiries. His facilities for study and the progress which he made generally in his profession, can hardly be better presented than in the following certificates and diploma:

HARVARD UNIVERSITY.—*Medical Matriculation.* Mr. Wm. Thos. Green Morton has Matriculated.

BOSTON, Nov. 6th, 1844.

WALTER CHANNING, *Dean.*

HARVARD UNIVERSITY.—*Lectures on Anatomy and Surgery.* Admit W. T. G. Morton.

November, 1844.

JOHN C. WARREN.

HARVARD UNIVERSITY.—*Principles of Surgery and Clinical Surgery,* by GEO. HAYWARD, M. D. Admit W. T. G. Morton.

November, 1844. •

HARVARD UNIVERSITY.—*Lectures on Materia Medica,* by JACOB BIGELOW, M. D. Admit W. T. G. Morton.

BOSTON, November, 1844.

HARVARD UNIVERSITY.—*Theory and Practice of Physic,* by JOHN WARE, M. D. Admit W. T. G. Morton.

November, 1844.

HARVARD UNIVERSITY.—*Theory and Practice of Midwifery and Medical Jurisprudence,* by WALTER CHANNING, M. D. Admit W. T. G. Morton.

BOSTON, November, 1844.

HARVARD UNIVERSITY.—*Lectures on Chemistry.* Admit Mr. W. T. G. Morton.

November, 1844.

J. W. WEBSTER, *Professor.*

Admit Mr. Wm. Thos. Green Morton to the MASSACHUSETTS GENERAL HOSPITAL.

BOSTON, November 6, 1844.

This ticket admits Mr. W. T. G. Morton to the school of PRACTICAL ANATOMY, in Harvard University.

1844-'5.

SAMUEL PARKMAN.

HARVARD UNIVERSITY.—*Lectures on Anatomy and Surgery.* Admit W. T. G. Morton.
NOVEMBER, 1845. JOHN C. WARREN.

HARVARD UNIVERSITY.—*Principles of Surgery and Clinical Surgery,* by GEORGE HAYWARD, M. D. Admit W. T. G. Morton.
NOVEMBER, 1845.

HARVARD UNIVERSITY.—*Lectures on Materia Medica,* by JACOB BIGELOW, M. D. W. T. G. Morton.
BOSTON, November, 1845.

HARVARD UNIVERSITY.—*Theory and Practice of Physic,* by JOHN WARE, M. D. Admit W. T. G. Morton.
NOVEMBER, 1845.

HARVARD UNIVERSITY.—*Theory and Practice of Midwifery, and Medical Jurisprudence,* by WALTER CHANNING, M. D. Admit W. T. G. Morton.
BOSTON, November, 1845.

HARVARD UNIVERSITY.—*Lectures on Chemistry.* Admit Mr. W. T. G. Morton.
NOVEMBER, 1845. J. W. WEBSTER, *Professor.*

Admit Mr. Wm. Thos. Green Morton to the Massachusetts General Hospital, four months.
BOSTON, November 5, 1845.

*Professores et Curatores Senatûs Medici Universitatis Washingtoni-
uniæ Baltimorensis omnibus hæc litteras visuris, salutem.*

Nos summâ Reipublicæ Marilandie auctoritate instructi, certiores facimus omnes ad quos hæc litteræ nostræ pervenerint, virum ornatissimum W. T. G. Morton artis Medicæ et Chirurgicæ studiis excultum, in sessione nostrâ solemni, apud Nos esse comprobatum. Quocirca eidem W. T. G. Morton Doctoris Medici Gradum, majore suffragiorum numero concessimus, eumque singulis inter nos et alibi gentium privilegiis et juribus ad gradum istum pertinentibus, frui jussimus.

Cujus rei quo major sit fides, Præsentes Has, Collegii Sigillo et chirographis nostris munitas, dare placuit.

Datum Baltimori Die Mensis Cal Martis annoque Salutis Reparatæ 18 .

JOHANNES C. S. MONKUR, M. D., *Prax. et Theoret. Med. Professor.*
GULIELMUS H. STOKES, M. D., *Inst. Med. Med. Jurisp. et Insan. Professor.*
GEORGIUM MCCOOK, A.M. M. D., *Professor Chirurgicæ.*
GEO. C. M. ROBERTS, M. D. D.D., *Obstet. et Mul. et Inf. Morb. Professor.*
THO. E. BOND, A.M., M. D., *Therap. Mat. Med. et Hyg. Professor.*
REGE N. WRIGHT, A.M., M. D., *Chem. Professor.*
GEORGIUM MCCOOK, A.M., M. D., *Professor Anatomice.*

J. V. MCJILTON,	} <i>Curatores.</i>
Z. COLLINS LEE,	
BENJAMIN KURTZ, D.D.,	
JOHANNES G. MORRIS, D.D.,	
HUGH JENKINS,	
J. T. MACKENZIE, M. D.,	

[SEAL.]

*To the Secretary of the Executive Committee of the American Society of
Dental Surgeons :*

Mr. W. T. G. Morton, Dentist, entered his name with me as a student of medicine March 20, 1844, and attended to practical anatomy, in the Massachusetts Medical College, during the winter of that year, where he dissected with diligence and zeal, and paid special attention to the anatomy of the head and throat—parts of human anatomy particularly important to the surgeon dentist. He also studied Bell's and other standard works on anatomy, and attended the lectures of Drs. Warren, Hayward, and other professors. I would recommend him as a suitable person for admission as a dental surgeon. He is a skilful operator in dentistry, both in the surgical and mechanical departments, and has studied the chemical properties of the ingredients required for the manufacture of artificial teeth.

CHARLES T. JACKSON, M. D.

Prior to this time, Dr. Jackson had, as he states, recommended chloric ether as an external application to allay pain in the teeth and gums; and had furnished several dentists in Boston, his friends, with the article in its purity; he does not name Dr. Morton among the number; but from the relations which subsisted between them, from the fact that Dr. Morton was at that time the family dentist of Dr. Jackson, as well as his student in medicine, your committee think the statement of Dr. Morton, in this particular, supported by that of Dr. Jackson. Add to this the fact, well known at the time to college students, and especially to students of chemistry and medicine, that the vapor of sulphuric ether inhaled for a short time allayed pain, and we have the circumstances which would naturally direct the mind of the inquirer to that substance as one whose inhalation would be probably safe, and which would render the patient insensible during a short but painful operation. As additional proof of the direction of Dr. Morton's studies, and that he had the means in his power of knowing all that was known of this agent then familiarly used as a nepenthe, your committee are referred to a bill of books purchased by Dr. Morton of B. B. Mussey, of Boston, on the 3d of May, 1845. Among them is *Peruias Materia Medica*, which contains the following sentence: "the vapor of ether is inhaled in spasmodic asthma, chronic catarrh, dyspepsia, and whooping cough, and to *relieve the effects caused by the accidental inhalation of chloraic gas.*" Its intoxicating or stupefying effects were, as we have already said, well known to students and scientific men.

On the 30th day of June, 1846, three months before the discovery was made public, it appears, by the statement of Richard H. Dana, jr., Attorney at Law, and by a charge in his books, that an article of agreement was entered into by Dr. Morton and G. G. Hayden, by which the latter agreed to take charge of the business of Dr. Morton for a time; Dr. Morton giving to Mr. Dana as a reason of his entering into the arrangement, that he wished to give his attention to another matter of great importance, which, if successful, would revolutionize the practice of dentistry.

This conversation was shortly after detailed by Richard H. Dana, jr. to Dr. Francis Dana, jr., whose corroborative evidence puts the substance of the conversation beyond question, and the date is fixed by that of the instrument and the entry above referred to.

Granville G. Hayden testifies—

“That, about the last of June, 1846, Dr. William T. G. Morton called upon me at my office, No. 23, Tremont Row, and stated to me that he wished to make some arrangements with me that would relieve him from all care as to the superintendence of those employed by him in making teeth, and all other matters in his office. He stated, as a reason for urging me to superintend his affairs in his office, that he had an idea in his head, connected with dentistry, which he thought ‘would be one of the greatest things ever known,’ and that he wished to perfect it, and give his whole time and attention to its development. Being extremely urgent in the matter, I made an engagement with him the same day, according to his request. I then asked him what his ‘seeret’ was. ‘Oh,’ said he, ‘you will know in a short time.’ I still insisted upon knowing it, and he finally told me the same night—to wit, the night of the last day of June, 1846, aforesaid—that ‘it was something he had discovered which would enable him to extraet teeth without pain.’ I then asked him if it was not what Dr. Wells, his former partner, had used; and he replied, ‘No! nothing like it;’ and, furthermore, ‘that it was something that neither he, nor any one else, had ever used.’ He then told me he had already tried it upon a dog, and described its effects upon him, which (from his description) exactly correspond with the effects of ether upon persons who have subjected themselves to its influence, under my observation. All this happened in June, 1846. He then requested me not to mention what he had communicated to me.”

Francis Whitman testifies as follows—

“I have often heard Dr. Morton speak about discovering some means of extraeting teeth without pain. This discovery appeared to be the subject of his thoughts and investigations during the greater part of last year, *i. e.*, 1846. One day—I think it was previous to July, 1846—Dr. M., in speaking of the improvements he had made in his profession, and of some one improvement in particuilar, said, if he could only extract teeth without pain, he ‘would make a stir.’ I replied, that I hardly thought it could be done. He said, he believed it could, and that he would find out something yet to aecomplish his purpose. In conversation with Dr. M., some time in July, he spoke of having his patients coming in at one door, having all their teeth extracted without pain and without knowing it, and then going into the next room, and having a full set put in.

“I recollect Dr. Morton came into the office one day in great glee, and exclaimed, that he had ‘found it,’ and that he could extract teeth without pain! I don’t recollect what followed; but, soon after, he wanted one of us in the office to try it, and he then sent William and Thomas out to hire a man to come and have an experiment tried upon him. After all these circumstances happened, Dr. Hayden advised Dr. Morton to consult with some chemist in relation to this discovery. I went, at Dr. Morton’s request, to see if Dr. Jackson had returned, (he having been absent from the city,) but found that he was still absent.”

From this testimony, corroborative of the statement of Dr. Morton, it does, in the opinion of your committee, sufficiently appear that he was, prior and subsequent to the 30th of June, 1846, intent upon the discovery of some anæsthetic agent, which would enable him to extraet teeth with-

out pain; and that he had faith and confidence that he was on the point of making the discovery. He says, in his narrative, that the anæsthetic agent, which he then had in view, was sulphuric ether, and the proof adduced is, in the opinion of your committee, equally conclusive in support of that fact.

Theodore Metcalf sailed for Europe in the ship "Joshua Bates" on the 6th day of July, 1846, on a tour, from which he returned in the fall of 1847. We give below a note addressed by him to Dr. Morton; and an extract from a letter to the trustees of the General Hospital, each a letter to N. J. Bowditch Esq., bearing directly on this point.

In his note to Dr. Morton dated December 20, 1847, he says:

"I can only state that I remember to have met you at Mr. Burnett's store early in the summer of 1846, and to have had a conversation with you in regard to the medicinal qualities of *sulphuric ether*, a quantity of which you were then purchasing. I cannot, as you desire, give the precise date, but know it to have been previous to July 6, as I left Boston on that day for a tour, from which I have but a few weeks returned."

"Boston, January 26, 1848.

"SIR: In answer to your inquiry respecting the nature of my interview with Dr. Morton, I can only add to my note of December 20, that the conversation was commenced by some inquiry on his part, concerning the nature and effects of sulphuric ether, a vial of which he then held in his hand.

"In answer to his several questions, I gave him such information as he could have obtained from any intelligent apothecary at that time, and also related to him some personal experience as to its use as a substitute for the nitrous oxide; adding the then generally received opinion, that its excessive inhalation would produce dangerous, if not fatal consequences. Some reference was made—but whether by Mr. Morton or myself, I cannot remember—to the unsuccessful experiments of his former partner, Mr. Wells, with the nitrous oxide. It was one of those casual conversations which quickly pass from the mind; and it was for the first time recalled to my memory, upon seeing, months after, in a French journal, an account of the anæsthetic effects of ether, the discovery of which was ascribed by the writer to a Boston dentist.

"I am, sir, very respectfully, your obedient servant,

"THEODORE METCALF.

"N. J. BOWDITCH, Esq."

In his letter to the Trustees of the Massachusetts General Hospital, dated Boston, January 6th, 1849, Mr. Metcalf says:

"This belief is founded partly upon my memory of the conversation with Morton and partly upon the fact that *when in Italy, months after, I saw for the first time an account of etherization in a French journal, in which its discovery was ascribed simply to a 'Boston dentist'; I said at once that I was sure Morton must be the man, for he was engaged upon ether before I left home, and that I now knew why he had been so curious, and at the same time shy in his conversation with me.*"

If we consider the then pursuit of Dr. Morton, his earnest desire for information, and his anxiety to preserve his secret, his shyness with

others and his comparative freedom in conversation with Mr. Metcalf will be fully explained. Mr. Metcalf was a chemist, possessed of all the current scientific knowledge of his profession, and he was just setting out on a voyage to Europe, so that Dr. Morton could avail himself of his knowledge and his suggestions with safety to his secret.

Dr. Hayden says that "about the first of August, 1846, Dr. Morton asked me where he could get some pure ether, and asked me to go to Joseph Burnett's apothecary shop and purchase a four-ounce vial full of ether, which he said he wished to carry home with him, he being about to leave town for Needham, where he then resided. And about the same time he explained to me the nature and effects of ether, and told me that if he could get any patient to inhale a certain quantity of ether gas, it would cause insensibility to the pain of extracting teeth, and he tried to induce me to take it. Dr. Morton said he had breathed it himself, and it would do no harm; and he at the same time tried to induce three young men in the office to take the gas. This was in August, 1846. He was continually talking about his discovery to me. From the time I engaged with Dr. M. as aforesaid, he frequently stated to me that he had nearly perfected every department in dentistry, save extracting teeth without pain, and that he was determined to accomplish that also. But towards the last of September following, he intimated to me that, in some particulars, his discovery did not work exactly right, and, in my presence, was consulting his books to ascertain something further about ether."

The inquiry made of Dr. Hayden for a chemist of whom pure sulphuric ether could be obtained, was probably to avoid going too frequently to the same place for the ether, and thus exciting inquiry which might lead to a discovery of his secret; and at last he may have sent Dr. Hayden, instead of going himself, for the same purpose. We find here as early as August 1st, 1846, the anæsthetic agent, sulphuric ether, connected by Dr. Morton with the object of his pursuit.

Shortly after this, and prior to the 28th of September, 1846, Dr. Morton called upon Mr. Wightman, a well known maker of philosophical instruments and apparatus in Boston, told him that he had abandoned his views of increasing the security of artificial teeth by atmospheric pressure, which he found to be erroneous, and was engaged upon something of much greater importance to his profession. He then wished him to show him some gas bags of India rubber cloth made for retaining gas, and inquired whether it would do to put sulphuric ether in them. Not being able to give Dr. Morton satisfactory information on the subject, he advised him to call on Dr. Jackson, which he said he would do. About this time some sulphuric ether was procured for Dr. Morton, not in his own name, and brought to his office by Wm. P. Leavitt, one of the young men in his employment. Another of the young men, Thomas R. Spear, was first prevailed upon to inhale the vapor, but the effect on him was far from being satisfactory. Leavitt then took it, also with no satisfactory result, and Dr. Morton was for a time greatly disheartened. (See depositions of Leavitt and Spear, in Appendix.) He complained to Dr. Hayden that, in some particulars, his discovery did not work exactly right, and, "in my presence," says the witness, "was consulting his books to ascertain something further about ether." We find this statement fully sustained by the testimony of Francis Whitman. He says:

"I told Dr. Morton I knew what it was that William had brought, and said it was chloric ether. Dr. M. then said he wished to know if ether would dissolve India rubber, and sent Wm. P. Leavitt to inquire of Dr. Gay if it would. About this time Dr. M. asked me to get the books on chemistry, and find what they said about ether. I did so, and read it over to him, and I think he went to Burnett's to see if he could find something there."

Your committee are satisfied from the statement of Dr. Morton, and from the evidence by which it is thus far fully corroborated, that prior to and on the 30th of September, 1846, he was occupied with the conviction that an anæsthetic agent might be discovered which would remove all insensibility to pain in patients submitted to the operations of the dentist; that sulphuric ether was the agent; and that perfect success required only full assurance of its safety, ether of a good quality, and the proper mode of administering it; that he sought assurance of these by consulting books to which he had access, and learned men from whom he could obtain the current knowledge and experience of the day.

On the 30th of September, 1846, as he declares, he called on Dr. Jackson with a view of obtaining such information as would, if possible, remove the difficulties which he had encountered, and at the same time with a determination to conceal from him the object of his long and earnest pursuit, lest his hint should be taken and he be anticipated in this discovery. There were four persons present at this interview, and each gives an account different from the rest as to what occurred at it. All, however, agree in one particular, namely, that Dr. Morton assumed total ignorance of sulphuric ether, its nature and qualities, and left the impression on the minds of those present that he knew nothing of it. That he did at that time in fact know much of sulphuric ether; that it had for many months preceding been the subject of his earnest thought and sedulous inquiry; that his mind was so much possessed with it that he feared, in every one with whom he conversed, a rival who might anticipate him in the discovery and development of its qualities, is proved to the entire satisfaction of your committee. A former committee of this House, to whose able report we shall often have occasion to refer, speaking of the disguise thus practised by Dr. Morton, says:

"This does not militate against the general effect of the statement of Dr. Morton. He went, as he says, to Dr. Jackson to obtain certain information; but at the same time anxious to conceal from him the object of his pursuit, being fearful lest Dr. Jackson might anticipate him in bringing the discovery to perfection. We deal with this matter as a question of fact, not of morals, and do not decide whether Dr. Morton might, consistently with the obligations which truth imposes, use artificial means to conceal a mental conception which he did not wish to divulge. We believe, however, where a person has a right to his secret, and is under no obligations to disclose it, a direct denial of that which was fact, for the purpose of such concealment, has not been visited with strong moral censure. We would instance the case of Walter Scott at the table of George 4th, who, when toasted by his majesty as the author of *Waverley*, declared he was *not* the author."

Your committee concur in the opinion that if any moral censure is to be visited upon Dr. Morton for a studied concealment of his possession of what he deemed to be a treasure above all price, and for the safety of which he so much feared, that censure must be slight indeed. His account of the interview will be found in his memoir to the Academy of Arts and Sciences at Paris, above set out.

Doctor Jackson, who first publicly made claim to the discovery after its immense importance was established by several safe and painless operations under its influence in the Medical Hospital, avers that he first disclosed to Dr. Morton the use of the vapor of pure sulphuric ether on the 30th of September; that he then communicated to him his prior discovery of its anesthetic qualities, and assured him that it would prevent all pain in a surgical operation, and that it could be used with perfect safety; in short, that he, Dr. Jackson, then employed Dr. Morton as his agent, operator, or "*nurse*," to administer this pain-destroying vapor; and that then, in the presence of two witnesses, he distinctly took upon himself all the responsibility of its administration.

One of the witnesses present, George O. Barnes, sustains Dr. Jackson's statement in two material points, namely, that when he advised the administration of sulphuric ether, he averred that it would render the operation painless, and that it was safe, and he would be responsible for its consequences.

The other witness, James McIntire, though evidently testifying with a strong opinion against Dr. Morton, does not support Dr. Jackson on either of these important points. He says, Dr. Jackson advised the use of sulphuric ether; said it was safe, and that it "would make the patients insensible and" the operator "could do what he had a mind to with them." But he states no assumption of responsibility, and no opinion or assurance of Dr. Jackson, that the vapor of sulphuric ether would render the patient so insensible as not to perceive pain. The evidence of these witnesses will be more particularly considered in another connexion. Suffice it for the present to say that, your committee are satisfied that Dr. Jackson did not, on that day, "*expressly*" assume any such responsibility. They cannot credit it, for it is proved by evidence, and was admitted in the argument by Dr. Jackson's counsel before a former committee of this House, that the morning after the successful operation of September 30, when the same was reported to him, he refused a certificate *in writing* to Dr. Morton that the vapor might be inhaled with safety. Dr. Jackson could not, as an honorable man, have taken the responsibility *orally* of the exhibition of a medical prescription, claimed as his own, and exhibited by an agent or operator under his instruction; and, forthwith, thereafter, have refused to assume the same responsibility *in writing*. And, indeed, it is usual for physicians to give their prescriptions in writing, not orally. Nor do your committee believe that Dr. Jackson on that occasion declared that the inhalation of the vapor of sulphuric ether, within safe and proper limits, would render the operation painless. If he had advanced such an opinion, it could not have failed to be noticed and remembered by his student, Mr. McIntire, for it would have been the first notice to him of a miracle in surgery. But Dr. Jackson's conversation with Mr. Caleb Eddy on the 23d of October, 1846, and with the Hon. Edward Warren, is in the opinion of your committee conclusive upon this subject. On the evening of that day Dr. Jack-

son visited Mr. Eddy, and gave an account of his conversation between him and Dr. Morton of September 30, which the witness having detailed, says: "After Dr. Jackson had related the above, I said to him, 'Dr. Jackson, did you know at such time, that after a person had inhaled ether, and was asleep, his flesh could be cut with a knife without his experiencing any pain?' He replied, 'No, nor Morton either; he is a reckless man for using it as he has; the chance is, he will kill somebody yet.'" And the Hon. E. Warren, in his letter, says: "Dr. Jackson told me, in substance, that the so-called discovery was not his, but that Dr. Morton was responsible for it; that the new use of ether was dangerous, and would, he feared, be attended with fatal consequences, that he (Dr. Jackson) was not answerable for the results, and that, therefore, he would refer me to Dr. Morton for further information."

We cannot better express our views as to the interview of 30th September, and the exact value of the evidence which relates to it, than by quoting from the report of the former committee of this House to which we have already referred. After a close and careful examination of the statements, and evidence in reference to this interview, they say:

"The evidence, then, amounts to this: Dr. Morton came into Dr. Jackson's office, having in his hand a gas bag, with which he proposed to operate on the imagination of a refractory patient by administering to her atmospheric air. Dr. Jackson ridiculed the idea. Nitrous oxide was spoken of; Dr. Jackson objected to that, saying to Mr. Morton that if he attempted to make it, it would become nitric oxide. He then suggested sulphuric ether, and said it would make the patient insensible, and Morton could do what he pleased with her. This conversation, it will be noted, all took place about a refractory patient; the object considered was the mode of bringing a nervous patient to a condition in which she could be operated upon, not in which she would feel no pain from the operation. Mr. McIntire says not one word about pain or its absence in the operation—but that the operator could do what he pleased with the patient under the influence of sulphuric ether. If this conclusion be correct, the information given by Dr. Jackson to Dr. Morton was no more than the current knowledge of the age—no more than he would have been told by any scientific man, or than he would have read in books which treat of chemistry and medicine; and if it differed in anything from the general opinion of scientific men, it was in a stronger than ordinary assurance that the vapor was not injurious to health. At the same time, it is very clear to your committee that Dr. Morton relied more implicitly on information which he obtained from Dr. Jackson than from any other source, and that the information was given with the unhesitating confidence arising from a consciousness of high scientific attainments.

"This view of the subject awards to Dr. Jackson the merit of greatly aiding by his advice and instructions in the discovery. He did not himself produce the result, which was new; or by his information carry knowledge in that direction, beyond the point it had already reached. He was a safe and reliable guide to its then utmost limit in that direction—the Calpe and Abyla of scientific research—but left the sea beyond to be explored by others."

Doctor Morton having obtained such further information of the properties and preparation of sulphuric ether as Dr. Jackson could

give him, and having heard from him an opinion that it might be administered safely, returned to his house, procured a fresh supply of the ether, and, as he says, tried upon himself the experiment of its inhalation, the manner and effects of which are fully stated in his memoir above set forth. We have no reason to doubt the entire truth and accuracy of this statement, though from the nature of the transaction he cannot verify it by direct evidence. Almost immediately after he recovered consciousness, and while he was elate with the success of his recent experiment, and full of fresh and newly awakened confidence, a stout laboring man, in agony with the tooth-ache, entered and desired to have his tooth extracted, but shrunk from the apprehended pain. He asked to be mesmerized. Dr. Morton told him he had a better application than mesmerism, which he proposed to use. The man without much inquiry, on the assurance that it was safe and would alleviate the pain, consented, and in five minutes after he had taken his seat in the operator's chair the great discovery was verified.

The special circumstances attendant on this first actual experiment, were most fortunate for Dr. Morton—for the cause of surgical science—and for the human race. The patient, owing to his intense suffering, was glad to avail himself of any thing, real or imaginary, to relieve the pain which he felt, and to mitigate that which he feared. He therefore inhaled the vapor freely, and delighted with the soothing lenitive, he continued to inhale it eagerly, until anæsthesia being complete, he had forgotten his past sufferings and was beyond the reach of present pain. He was a man of vigorous constitution; he immediately rallied, unconscious of the operation which had been performed, and wholly relieved from the pain which so lately afflicted him. If in his stead, the boy, who sickened with the inhalation, and whose parents, believing him poisoned, threatened a prosecution, had been the first subject, the experiments would probably have gone no further; Dr. Morton would have been overwhelmed with censure and ridicule, and we do not think that either of the contestants would have come in to assert his claim to the disgrace of the failure. Considering the result, it is not a matter of surprise that Dr. Morton was elate with his success. He immediately announced it to those about him, though he concealed from them all, except Hayden, the agent with which the anæsthesia had been effected. He immediately obtained the certificate of Eben Frost, the subject of his experiment, (which will be found in the App.) consulted with Dr. Hayden about testing his pain-subduing vapor in some operation in the Hospital, and next morning called on Dr. Jackson, informed him of the success of the experiment, and asked him for a certificate that the vapor was harmless in its effects. This Dr. Jackson refused to give him.

Dr. Morton gives, in the paper above set forth, the subsequent steps taken by him to perfect and verify his discovery. His general narrative of alternate success and discouragement in the cases arising in his office is fully corroborated by Dr. Hayden. He says:

“The first successful experiment upon any patient was made September 30, 1846, by inhaling ether through a folded cloth, and on that occasion a tooth was extracted without pain. We tried repeated experiments with the same means subsequently, and they all resulted in total failures. Dr. M. said that Dr. Jackson recommended a certain apparatus, which he lent Dr. Morton from his laboratory, consisting of a glass

tube of equal size throughout, having a neck, and being about three feet long. This was likewise a total failure. So far, all our experiments, with one exception, proving abortive, we found that a different apparatus must be obtained, and it was at this time that Dr. M. procured, from Mr. Wightman, of Cornhill, a conical glass tube, with which, by inserting a sponge saturated with ether in the larger end, we had better success, and our experiments began to assume a more promising aspect.

"Still, our success was not uniform, and far from perfect. At this time, Dr. M. suggested that our failures might be owing to the fact that, in all our experiments so far, the patient had breathed the expired vapor back into the vessel, thus inhaling the same over and over. He then stated that the expired air should pass off into the surrounding atmosphere, and wished me to make a pattern for an apparatus, by which the air should pass into the vessel, combine with the ether, be inhaled into the lungs, and the expired air thrown off into the room. This idea, as thus forced upon him, and communicated to me, was fully elaborated, and corresponds most accurately with the apparatus now in use in this country and in Europe, and for which Dr. M. has applied for letters patent. I replied, that he had explained his idea so clearly that he would have no difficulty in directing a philosophical-instrument maker to manufacture a proper inhaler at once, without a pattern, and recommended him to Mr. Chamberlain, in School street, to whom he applied accordingly, and who made, as thus desired, the first inhaler. And with such an apparatus, we have had almost uniform success to this day, the results of which are known to the world.

"And I will here state that, on the evening of the 30th of September, after the first experiment had been made with success, Dr. Morton spoke about going to the hospital and using the ether there, and thus bring out the new discovery. After several other successful experiments, the question came up anew, how to introduce it to the world, when Dr. M. stated that Dr. Jackson had declined to countenance it, or aid in bringing out, and then he (Dr. M.) said he would see Dr. Warren, and have his discovery introduced into the Massachusetts General Hospital. He went out and soon returned, stating that Dr. W. had agreed to afford him an opportunity to apply the vapor, as soon as practicable, in the hospital."

So much for what occurred in the office of Dr. Morton, his difficulties, and the skill and energy with which he overcame them. But his discovery was now to come before the world, and from the time of its advent, witnesses multiply on us in numbers too great for all to receive even a passing notice. The following is an account given by Dr. Hayward, a short time after, of the first introduction of the vapor of ether into the Massachusetts General Hospital—

"The ether was administered at the hospital by Dr. Morton on the 16th of October, to a man upon whom Dr. Warren was to operate for a tumor on the face. The effect in this case was not complete; the suffering, however, was very much less than it would have been under ordinary circumstances, and the result was on the whole so satisfactory that a second trial was made on the following day.

"The patient to whom the ether was administered on the 17th of October was a female with a fatty tumor on the arm, between the

shoulder and the elbow. At the request of Dr. Warren I did the operation. The patient was insensible during the whole time, and was entirely unconscious. The operation lasted about seven minutes, but could not be regarded as a severe one.

"These are the first surgical operations, except those of dentistry, that were ever performed on patients while under the influence of the ether."

"On the 1st of November I took charge of the surgical department of the hospital; and on the following day, in conversation with Dr. Warren, I stated that I did not intend to allow the medical patients to inhale this preparation of Dr. Morton (for we were then ignorant of the precise nature of it) during my period of service, unless all the surgeons of the hospital were told what it was, and were satisfied of the safety of using it. Dr. Warren agreed with me as to the propriety of this course.

"On the 6th of November, Dr. Morton called at my house and asked me if I was willing to have his preparation inhaled by a patient, whose limb I was to amputate on the following day. I told him of the conversation I had had with Dr. Warren on the subject. Dr. Morton at once said that he was ready to let us know what the article was, and to give the surgeons of the hospital the right to use it there when they pleased. He added, that he would send me a letter in the course of the day to this effect. I requested him to address it to Dr. Warren, as he was the senior surgeon, and told him that I would submit it to my colleagues at a consultation to be held on the following morning. He wrote the letter accordingly; the subject was maturely considered by the surgeons, who were unanimously of opinion that the ether should be inhaled by the individual who was to undergo the operation that day.

"The patient was a girl of twenty years of age, named Alice Mohan, who had suffered for two years from a disease of the knee, which terminated in suppuration of the joint and caries of the bones. For some months before the operation, her constitutional symptoms had become threatening, and the removal of the limb seemed to be the only chance for her life. The ether was administered by Dr. Morton. In a little more than three minutes she was brought under the influence of it; the limb was removed, and all the vessels were tied but the last, which was the sixth, before she gave any indication of consciousness or suffering. She then groaned and cried out faintly. She afterwards said that she was wholly unconscious and insensible up to that time, and she seemed to be much surprised when she was told that her limb was off. She recovered rapidly, suffering less than patients usually do after amputation of the thigh, regained her strength and flesh, and was discharged well on the 22d of December."

Nor are there wanting abundant contemporary papers attesting the discovery, recognising Dr. Morton as its author, and showing its rapid advance to the full confidence of the public. (See Appendix.) We give below a copy of the letter written by Dr. Hayward, at the request of Dr. Warren, inviting Dr. Morton to attend at the first of the above named surgical operations, and administer to the patient:

"DEAR SIR: I write at the request of Dr. J. C. Warren, to invite you to be present on Friday morning at 10 o'clock at the hospital, to admin-

ister to a patient who is then to be operated upon the preparation which you have invented to diminish the sensibility to pain.

"Yours, respectfully,

"C. F. HAYWARD,

"House Surgeon to the General Hospital, October 14th, 1846.

"Dr. MORTON, Tremont Row."

Dr. Hayward states above that Dr. Morton, on the 6th of November, 1846, addressed a letter to Dr. Warren informing him that the anæsthetic agent which he used was the vapor of sulphuric ether, and offering the free use of it to the hospital. We give below Dr. Warren's brief note in reply:

"DEAR SIR: I beg leave to acknowledge the reception of your polite letter. I shall lose no time in laying it before the surgeons of the hospital.

"I remain respectfully, yours,

"PARK STREET, November 6th."

"J. C. WARREN.

We think proper also to insert two other notes written December 11th, 1846; one by Dr. Hayward, at the request of Dr. Warren; the other by Dr. Warren himself; both relative to an operation to be performed on the 12th; also, a certificate of Dr. Warren of January 16th, 1847:

"SIR: I am requested by Dr. Warren to ask you, if convenient to yourself, to administer your preparation to a patient from whom a part of the upper jaw is to be removed. The operation will be done by Dr. Warren to-morrow at 11, A. M.

"Yours, &c.,

"C. F. HAYWARD,

"M. G. Hospital, December 11, 1846.

"Dr. MORTON, Tremont Row."

"Dr. MORTON—*Dear Sir:* I inclose a note which I have just received from Dr. Brown. I think there would be a propriety in granting his request. There will be an operation at the hospital to-morrow at 11 o'clock, at which I shall be glad to have your aid, if perfectly convenient.

"Truly yours,

"2, PARK STREET, December 11."

"J. C. WARREN.

"BOSTON, January 6, 1847.

"I hereby declare and certify, to the best of my knowledge and recollection, that I never heard of the use of sulphuric ether by inhalation as a means of preventing the pain of surgical operations, until it was suggested by Dr. Morton in the latter part of October, 1846.

"JOHN C. WARREN,

*"Professor of Anatomy and Surgery of
the Massachusetts General Hospital."*

The papers given above show how, in the ordinary course of things, a discovery like this inscribes itself at once on something more exact and more durable than mere human memory.

Your committee will add to the above a letter from Dr. Warren to their chairman, and a copy of the first entry in the records of the Massachusetts General Hospital, touching the introduction of sulphuric ether in their surgical operations:

"BOSTON, *January 21, 1852.*

"SIR: Having had the honor of receiving from you some questions relating to the ethereal inhalation, I have made good and true answers thereto, which I beg leave to enclose, and with these a short statement of the first instance of ethereal inhalation, which the committee can refer to if their time and inclination permit.

"I have the honor to be, respectfully, your obedient servant,

"JOHN C. WARREN.

"Hon. W. H. BISSELL."

"BOSTON, *January 21, 1852.*

"1. Chloric ether and sulphuric ether are used in our hospital. Chloroform is not, having been known to be fatal in many cases. The first surgical operation with ether was done by me, at the request of Dr. Wm. T. G. Morton, on the 16th of October, 1846. The circumstances of the case are in a separate paper herewith enclosed.

"2. Ether is used in our hospital in all operations accompanied with much pain. Its effect is very remarkable in the prevention of pain, in all cases when properly administered. In my address to the American Medical Association at Cincinnati, in May, 1850, I stated that I had myself employed sulphuric and chloric ether, or seen them employed, in more than 1,500 cases. From that time to the present, I cannot speak with numerical accuracy, but I suppose the cases have exceeded 1,000; thus making an aggregate of more than 2,500. In no one instance has any serious result happened to the patient within my knowledge.

"3. As to the diminution of mortality, it is entirely impossible to give any definite answer; but the diminution of suffering may be supposed to diminish mortality by removing one of its causes.

"4. In my private practice I have always used ether for the prevention of pain in severe surgical operations, and usually, if not universally, with great relief to the patient and satisfaction to myself.

"5. The medical faculty within my knowledge generally consider the application of ether to the prevention of pain as the most valuable addition to the means of relieving human suffering since the introduction of vaccination.

"JOHN C. WARREN."

First case of ethereal inhalation. Copied from the surgical records of the Massachusetts General Hospital.

"This case is remarkable in the annals of surgery. It was the first surgical operation performed under the influence of ether. Dr. Warren had been applied to by Dr. Morton, a dentist, with the request that he would try the inhalation of a fluid, which he said he had found to be effectual in preventing pain during operations on the teeth. Dr. Warren having satisfied himself that the breathing of the fluid would be harmless, agreed to employ it when an opportunity presented. None occurring in private practice within a day or two, he determined to use it on this patient.

"Before the operation began some time was lost in waiting for Dr. Morton, and ultimately it was thought he would not appear. At length he arrived, and explained his detention by informing Dr. Warren that he had been occupied in preparing his apparatus, which consisted

of a tube connected with a glass globe. This apparatus he then proceeded to apply, and after four or five minutes the patient appeared to be asleep, and the operation was performed as above described. To the surprise of Dr. Warren and the other gentlemen present, the patient did not shrink nor cry out; but during the insulation of the veins he began to move his limbs and utter extraordinary expressions. These movements seemed to indicate the existence of pain, but after he had recovered his faculties he said he had experienced none, but only a sensation like that of scraping the part with a blunt instrument, and he ever after continued to say he had not felt any pain. The result of this operation led to the repetition of the use of ether in other cases, and in a few days its success was established, and its use resorted to in every considerable operation in the city of Boston and its vicinity."

By these operations, performed in a public hospital before professional men of the highest intelligence, and the perfect success of the ethereal vapor in annihilating all pain, its evident safety, and the readiness of recovery from the anæsthetic state, which resembled the waking from a deep and quiet sleep, a profound impression was made upon the public mind. In that of the surgical faculty it rose to enthusiasm. The success of the discovery was established; Boston, its native city, was proud of its maternity, and it was about to be hailed in Europe, whither a power swifter than the winds was wafting it, with wonder and applause.

During all this time Dr. Morton alone claimed the discovery and conducted the experiments. He had staked every thing dear in life, his hopes of fortune and fame, upon the discovery. He gave his labor by day and his thoughts by night to the perfecting of all that was incomplete in its application; and in the language of the report of the Trustees of the Massachusetts General Hospital, "it is a mortifying fact that Dr. Morton's pecuniary affairs have become embarrassed in consequence of the interruption of his regular business, resulting from his efforts and experiments in establishing this great truth, and that his health has also severely suffered from the same cause, so that he can devote only a small part of each day to his professional labors. He became poor in a cause which has made the world his debtor. The committee have the highest medical authority (that of Dr. Homans) for saying that from living so much of late in an atmosphere of ether, and from the anxiety attending the various trials and experiments connected with the discovery, and from the excitement caused by the controversies which it has occasioned, the health of Dr. Morton has become such that he is unable to attend to his professional duties to any extent." And it was not until all was complete and completely verified, not until some time after the operation of the 2d of January, 1847, did any rival appear and publicly claim the discovery, or even a participation in it.

Subsequent to that time, however, public claims to the whole honor of the discovery have been advanced and are now urged before your committee, by Dr. Charles T. Jackson for himself, and for Dr. Horace Wells, deceased, by his personal representatives. On both of these we have touched in our examination of the discovery as connected with Dr. Morton, and we now propose to give to the claim of each a separate examination.

The first public appearance of Dr. Jackson at the hospital during the performance of an operation under the influence of the newly discovered

anæsthetic agent, is shown in the following extract from a letter of Dr. S. D. Townsend, one of the surgeons of the hospital, dated January 29th, 1852:

“Dr. Jackson presented himself for the first time on the 2d of January, 1847, and brought with him a bag of oxygen gas as an antidote to asphyxia. I have had this date always fixed in my mind by the fact that I performed an amputation on that day under the influence of ether, and this is also confirmed by the records of the hospital.”

Dr. Jackson in a letter addressed by him to Baron Van Humboldt, dated November 22, 1851, a copy of which he filed with your committee, in support of his claim to the discovery, after giving an account of the habitual use of the vapor of sulphuric ether for the purposes and in the manner which we have shown to have been familiar with the medical faculty, since about the year 1795, states the facts, and details the circumstances, which he alleges to have attended its inhalation by himself in the winter of 1841-'42; and gives at length what he says were his deductions from the phenomena consequent on that inhalation. He says:

“The circumstances were as follows: In the winter of 1841-'42, I was employed to give a few lectures before the Meehanie's Charitable Association in Boston, and in my last lecture, which I think was in the month of February, I had occasion to show a number of experiments in illustration of the theory of volcanic eruptions, and for my experiments I prepared a large quantity of ehloraine gas, collecting it in gallon glass jars over boiling water. Just as one of these large jars was filled with pure chlorine, it overturned and broke, and in my endeavors to save the vessel, I accidentally got my lungs full of ehlorine gas, which nearly suffocated me, so that my life was in imminent danger. I immediately had ether and ammonia brought to me, and alternately inhaled them with great relief. The next morning my throat was severely inflamed and very painful, and I perceived a distinct flavor of ehlorine in my breath, and my lungs were still much oppressed. I determined, therefore, to make a thorough trial of the ether vapor, and for that purpose went into my laboratory, which adjoins my house in Somerset street, and made the experiment from which the discovery of anæsthesia was induced. I had a large supply of perfectly pure washed sulphuric ether which was prepared in the laboratory of my friend Mr. John H. Blake of Boston. I took a bottle of that ether and a folded towel, and seating myself in a rocking chair, and placing my feet in another chair, so as to secure a fixed position, as I reclined backward in the one in which I was seated. Soaking the towel in the ether, I placed it over my nose and mouth, so as to inhale the ether mixed with the air, and began to inhale the vapor deeply into my lungs. At first the ether made me cough, but soon that irritability ceased, and I noticed a sense of coolness followed by warmth, fulness of the head and chest, with giddiness and exultation, numbness of the feet and legs followed, a swimming or floating sensation, as if afloat in the air. This was accompanied with entire *loss of feeling*, even of contact with my chair in which I was seated. I noticed that all *pain had ceased in my throat*, and the sensations which I had were of the most agreeable kind. Much pleased and excited, I continued the inhalation of the ether vapor, and soon fell into a dreamy state, and

then became unconscious of all surrounding things. I know not how long I remained in that state, but suppose that it could not be less than a quarter of an hour, judging from the degree of dryness of the cloth, which during the state of unconsciousness had fallen from my mouth and nose and lay upon my breast. As I became conscious, I observed still there was no feeling of pain in my throat, and my limbs were still deeply benumbed, as if *the nerves of sensation were paralyzed*. A strange thrilling now began to be felt along the spine, but it was not in any way disagreeable. Little by little sensation began to manifest itself, first in the throat and body, and gradually extended to the extremities, but it was sometime before full sensation returned, and my throat became really painful.

“Reflecting upon these phenomena, the idea flashed into my mind, that *I had made the discovery I had for so long a time been in quest of*—a means of rendering the nerves of sensation temporarily insensible to pain, so as to admit of the performance of a surgical operation on an individual without his suffering pain therefrom. That *I did draw this inference, and did fully declare my unqualified belief in both the safety and efficiency of the method of destroying all sensation of pain in the human body, during this most severe surgical operations, no one doubts, and it is fully proved by abundant legal evidence, which has never been impeached or doubted in any quarter.*”

“I beg leave to refer you again to the evidence of Dr. William F. Channing, a man of science, Fellow of the American Academy of Arts and Sciences, son of the late Dr. William E. Channing, our most eminent divine. To the testimony of Dr. S. A. Bemis, one of our most eminent dentists. To the letter of John H. Blake, a distinguished chemist; and to the testimony of Mr. Henry D. Fowle, one of the best and most faithful apothecaries of Boston, (and to the letters of Dr. George T. Dexter, of New York, and of D. Jay Browne, of New York, obtained since this paper was written.) Their evidence, with that of my worthy friend and former pupil, Mr. Joseph Peabody, *élève ingénieur à l'école des mines* at Paris, prove that I had made this discovery, and long before any other person had even tried a single experiment of the kind. (See, also, the new and very important evidence of Dr. George T. Dexter, of New York, and that of Mr. D. J. Browne.)

“In the rapid inductions of the mind it is not always easy to trace the exact method of thought by which we suddenly arrive at great truths. But so far as I can trace the reasoning that rapidly flowed through my mind, it was based upon principles well understood by all educated physicians and physiologists. I knew that the nerves of sensation were distinct from that of motion and of organic life, and that one system might be paralyzed without necessarily or immediately affecting the others. I had seen often in my medical practice the nerves of sensation paralyzed without those of motion being affected, and those of motion paralyzed without those of sensation being influenced; and both the nerves of motion and sensation paralyzed without the ganglionic nerves or those of organic life being affected. I knew, also, that the nerves of sensation are stationed as sentinels near the exterior of our bodies, to warn us of danger from external causes of injury, and that there is no feeling in the internal portions of our bodies. I knew, also, that when the knife is applied in surgical operations, that there is little sense of

pain in any parts beneath the skin. This, my own surgical experience, as well as that of others, had long ago demonstrated, and the philosophy of those physiological facts was made known to the medical world, in England and in this country, by the researches of Sir Charles Bell, of England, and was fully proved by all the eminent anatomists and physiologists of Europe. Now, I had observed, 1st. That the nerves of sensation in my own body were rendered *insensible to pain* for some time before unconsciousness took place.

"2d. That all pain had ceased in a suffering part of my body during the stages of etherization preceding and following the unconscious state.

"3d. That this state of insensibility of the nerves of sensation continued for a sufficient length of time to admit of most surgical operations, and I had reason to believe that during the unconscious period the degree of insensibility was still greater, so that it would be impossible that any pain could be felt in a surgical operation.

"4th. That the nerves of motion and of the involuntary functions of respiration and circulation were in no wise affected; the functions of life going on as usual, while the nerves of sensation were rendered devoid of feeling, and the body could suffer no pain. By long experience in the trial of ether vapor in spasmodic asthma, and from numerous carefully conducted physiological experiments, I had learned that the vapor of ether could be safely inhaled into the lungs to an extent before believed to be highly dangerous. (Wood and Bache's Dispensatory; Beck's Medical Jurisprudence.) *That I did first discover that the nerves of sensation could be and were paralyzed to all sensation temporarily and safely by the inhalation of ether vapor, is admitted by all scientific men who have examined the evidence. That I did first prescribe its administration for the purpose of preventing all sensation of pain in surgical operations, with the guarantee on my medical and scientific responsibility, of its entire safety, if my directions were strictly obeyed, and did thus introduce the use of pure sulphuric ether mixed with air, into surgical practice, is fully proved by abundant testimony, and this is admitted by all persons who have examined the evidence that I have caused to be printed.*

"The only point contested by my opponents is, that in *their opinion* I had not sufficient reason for *drawing the inference that I did, as they admit, draw from my data*, and that I could not have "*known*" the full extent of the insensibility to pain of a surgical operation, and that this remained to be verified by actual trial. Now, it appears to me clear enough that when I had discovered that the nerves of sensation were paralyzed, that I did *know* that the body could feel no pain, and that my induction was the most natural thing in the process of reasoning from my well ascertained data. To the ignorant it is easy to appeal by allegations, like those of my very unscientific opponents, that 'Dr. Jackson could not have *known*,' anterior to the verification experiments performed at the hospital, that the patient was wholly insensible to pain when under the influence of ether; but no scientific physiologist or physician can possibly entertain a doubt of the sufficiency of my evidence, that the body could feel no pain when the *nerves of sensation were rendered insensible*. Again, it is claimed by my opponents, that inducing an ignorant dentist, a man of no medical knowledge, to perform the mere mechanical operations, under my advice and upon my medical responsibility, expressly assumed before witnesses, that I made him a co-

partner, or joint discoverer, and that *he* made the first application of my discovery. Now I respectfully dissent from this opinion, and, in my dissent, I am sustained by the highest scientific medical and legal authorities of this country, and by the most eminent men of science of Europe, who have considered this question. I claim that I not only *discovered the principle*, but also by my advice and prescription, as above stated, *made the application* in the highest sense of the term."

Your committee will attempt to determine the weight which ought to be given to this statement: first, by collating it with other facts, in the case of which they can have no doubt; second, by comparing it with other written statements of the same incident, made by Dr. Jackson himself of an earlier date; third, by considering its inherent probability when viewed in connexion with Dr. Jackson's own well-established acts and omissions; and, lastly, the extent to which it is supported or assailed by extrinsic evidence.

A portion of this statement of Dr. Jackson struck your committee with some surprise, that, namely, in which he says: "*That I did first prescribe its administration for the purpose of preventing all sensation of pain in surgical operations, with the guarantee my medical and scientific responsibility, of its entire safety, if my instructions were strictly obeyed, and did then introduce the use of pure sulphuric ether vapor, mixed with air, into surgical practice, is fully proved by abundant testimony, and this is admitted by all persons who have examined the evidence that I have caused to be printed.* The only point contested by my opponents is, that, in their opinion, I had not sufficient reason for drawing the inference that *I did, as they admit, draw from my data*, and that I could not have '*known*' the full extent of the insensibility to pain of a surgical operation, and that this remained to be verified by actual trial."

This is, within the knowledge of your committee, a wide departure from the actual state of fact touching the controversy. It is known to us by numerous documents, printed and written, that the positions which Dr. Jackson thus avers to have been universally conceded to him, are the very positions which have been most constantly and strongly contested since he first claimed for himself the merits of the discovery. It appears too, that neither of these points was conceded to him, but both adjudged against him by the Massachusetts General Hospital in their report of January, 1848, and most distinctly and emphatically so by the report of the committee of this house of February 24, 1849.

The hospital report notices this subject as follows:

"Down to September 30, 1846, Dr. Jackson had discovered nothing that had not been known and in print in London for some years. It was known, that ether would produce insensibility; that such insensibility, though sometimes fatal, was sometimes safe; and that one of the properties of ether was its power to obviate the ill effects of an inhalation of chlorine gas. The discovery of the safety and efficacy of the inhalation of ether in surgical operations had not yet been made; the only experiments which Dr. Jackson had tried, or caused to be tried, being those already prescribed by the text-books. Dr. Jackson had for some time entertained a strong impression that could it be used with safety and effect during the operations of the dentist—a conjecture which a hundred other persons may have made without discovering the fact;

and incidentally on more than one occasion, he had advised its use for that class of operations, but had been unable to persuade any one to use it, not even persons of science and intelligence, who were most familiar with all that Dr. Jackson knew or thought upon this subject.

"Dr. Morton had for some time been engaged in searching for a safe agent for promoting insensibility during dental operations. He knew of, and had, upon one occasion, taken part in, the nitrous-oxide experiments of Dr. Wells.

"As early as July, 1846, he purchased sulphuric ether, and proceeded to experiment upon it. On September 30, 1846, he has an interview with Dr. Jackson, and receives his decided advice to use pure rectified sulphuric ether during a dental operation, accompanied with the strongest assurances of its safety, and with the information where it could be obtained. Dr. Morton, unlike others who had received this advice, and notwithstanding he knew the prevailing belief of the dangerous and sometimes fatal character of this agent, forthwith acted upon it. That he proceeded to inhale it himself, rests, indeed, on his own assertion. The committee have no doubt of its truth. He certainly administered it to a patient. *By so doing, he made this discovery.* On learning this result, Dr. Jackson very naturally suggested to Dr. Morton that he had better get the ether tried by the surgeons of the hospital, which a witness of Dr. Morton's, however, alleges that he had previously determined to do. But all the subsequent steps were taken by Dr. Morton himself, without the slightest sympathy or co-operation on the part of Dr. Jackson, who, from alleged fear of his recklessness, withheld from him all countenance and encouragement. In view of these facts, the committee are of opinion, that the *exclusive* claims advanced by Dr. Jackson, though now very extensively recognized in foreign countries, are unfounded, being unwarranted alike by his acts and by his omissions; and that they involve great injustice towards Dr. Morton; that their names will be forever jointly, though not equally, associated in this discovery; Dr. Jackson being entitled to the credit of having rendered readily available the existing knowledge upon the subject of ether, which Dr. Morton was really, though not avowedly, seeking to obtain; and Dr. Morton having first demonstrated its safety and efficacy in the prevention of pain during surgical operations; and that Dr. Morton, by consenting to permit Dr. Jackson's name to be united with his in the patent, with the right to receive *one-tenth* part of its profits, has shown himself disposed, fairly and honorably, to recognize the amount of his indebtedness to Dr. Jackson's advice."

In the report of the committee of the House in February, 1849, where these questions are carefully examined, the conclusion is against the claim of Dr. Jackson on both these points; they say:

"It is, however, contended by Dr. Jackson, that in the administration of ether to his patient on the 30th September, and in the subsequent exhibition of it in the hospital, Dr. Morton acted as his agent merely; that he was in fact the experimenter as well as the discoverer, and the merit of success or the responsibility of failure rested on him. This position your committee will now proceed to examine.

"This claim is not supported by the evidence which has been thus far considered; indeed, it bears strongly against it, and your committee can

find no contemporary matter touching this point, except a statement of George O. Barnes, not yet commented upon. The witness, after stating Dr. Jackson's efforts to overcome the scruples of Morton, says: 'Indeed, Dr. Jackson urged the matter very earnestly and with perfect confidence, taking on himself the whole responsibility.' Now, if this be a deduction, an inference from the conversation stated, it is of no value whatever, except to show a certain earnestness in the witness. If it be but a further declaration, it is unsupported by the testimony of McIntire; and, in a third important particular, differs from and goes beyond him. But the well attested conduct of the parties themselves, at the time of the transaction in which this agency is claimed to have been conferred and accepted, what is termed by lawyers the *res gestæ*, shows more clearly than everything else the true relation which they then bore to each other, and each of them to the subject matter in controversy.

"Dr. Jackson claims that he had long had in his mind a conviction that the vapor of sulphuric ether could be inhaled without danger or injury to the patient, and that under its influence surgical operations could be performed without pain. All admit him to be a man of science, fully aware of the mighty value of such a discovery, and not at all indifferent to his own reputation in the scientific world. In this state of things we cannot conceive it possible that he could have remained inactive for years, waiting till chance should send him some one to bring out his great discovery, instead of proceeding himself by direct experiment. It is not at all disputed that Dr. Morton went to Dr. Jackson's shop that day uninvited; that *his* wants and not Dr. Jackson's wishes and purposes led to the conversation; that there was nothing of an especially confidential nature between them; and that what Dr. Jackson said to him, he said in the usual manner of public conversation, and not like a man who was engaging another to bring out a most important discovery to the world.

"But take Dr. Morton to be just what Dr. Jackson and his two witnesses represent him to have been at the time of that conversation, was he the man whom Dr. Jackson would have trusted to represent him in a matter so deeply involving his character and his fame? Say it is Jackson's discovery, the experiment is his, *he* is responsible for the consequences. If it succeed, he has made the noblest contribution to surgical science which the century has witnessed; if it fail, the consequences might be most disastrous. Whom does he select to carry out this, the most important conception of his life or of the age? Let his two witnesses answer.

"According to them, a man profoundly ignorant of the powerful medicinal agent which he was directed to employ, one who did not know what kind of "stuff" sulphuric ether was, and who wished to see it in order thus to test its qualities, is selected by one of the first scientific men of the age to conduct a delicate and dangerous experiment with this same sulphuric ether, on the success of which even more than reputation depended. If Dr. Jackson had dwelt upon the subject, conceived the discovery in his own mind, considered it with a view of making it known to the world and useful to mankind, he knew that much depended on the first public exhibition; and he also knew that it required science, prudence, and skill, to render the experiment successful, and prevent its becoming disastrous. Sulphuric ether would produce insensi-

bility to pain; *too little* of it would make the experiment ineffectual, and bring the operator and his nostrum into ridicule; *too much*, or the proper quantity *unskillfully administered*, would produce asphyxia, probably death. Under these circumstances, how can your committee believe that Dr. Jackson would have trusted such a man as his witnesses represent Dr. Morton to be, with his first experiment upon his great discovery? Would it not have been inexcusable in him to have done so? Would it not have shown a recklessness of his own fame and the lives of his fellow-men?

“Such a conclusion, your committee are satisfied, cannot be imputed to him with justice. Had Dr. Jackson made the discovery and felt that it was his, could he have failed to be at once aware of its vast importance, and the world-wide reputation it would give him, would he have trusted it for a moment in the hands of a man less skillful and scientific than himself? indeed, would he have entrusted it with any one? but would he not have himself seen that it was administered in a proper manner, and under proper conditions to make it safe and effectual? Would he not have stood by and watched the sinking pulse of his first subject, until insensibility was complete, and have been careful to withdraw it when he saw it was likely to endanger life, and thus done all that science and skill could do to avoid a failure or a catastrophe? But there was nothing of this. Having given the information which he did give in the conversation with Dr. Morton, he turned neither to the right nor left, nor troubled himself further on the subject, until he was advised by Dr. Morton that the experiment had been successful. He expresses no surprise, no emotion; it is an incident of the day—an occurrence. According to the testimony of Barnes, he advises Dr. Morton to try it in some capital operation in the hospital; does not say he will try it himself, which he might or ought to have done, if Morton had been his agent. He does not propose to get permission for Dr. Morton so to try it; though he well knew the application by himself, or in his name, would ensure the permission. He advises Dr. Morton to get permission, and try it in the hospital, and does not propose to be present, and in fact is not present when the trial is made, though the hospital was but five minutes’ walk from his door. That operation was successfully performed, and another was noticed to take place the next day, about which Dr. Jackson gave himself no concern, and at which he was not present. The committee feel that his conduct during this time was wholly inconsistent with the fact that he recognised the discovery as his own, and that these were his experiments.

“It is urged as a reason for his absence at the first operation in the hospital, that Dr. Morton did not inform him at what time it was to take place. As to this, there is no proof that he did or did not inform him; but surely, had Dr. Jackson felt the solicitude which the discoverer would naturally feel, he would have informed himself, and his daily associations naturally led him to the knowledge. On the other hand, after the successful operation of the 30th of September, and after Dr. Morton had seen his patient and ascertained that he had suffered no injury from the ether—elated with his success, he consulted Dr. Hayden as to the mode of bringing out the discovery, and suggested at once that he would introduce it into the hospital. A few days afterwards he told Dr. Hayden that Dr. Jackson would not countenance the discovery, and again

said he would go to Dr. Warren and endeavor to have it introduced into the hospital. The fact that Dr. Jackson refused to give Dr. Morton a certificate that ether was harmless in its effects, or might be used with safety, is admitted by Dr. Jackson in his defence by the Messrs. Lord; but they say it proves nothing but Dr. Jackson's "unwillingness to figure in Dr. Morton's advertisements, and his prudence in refusing to make himself responsible for anything and everything Morton, in his ignorance, might do, with an agent liable to the most dangerous abuse."

"This, if it stood alone, might be satisfactory; but one of the witnesses, Geo. O. Barnes, says that, on the 30th of September, Dr. Jackson employed Dr. Morton to use this very agent. He assured him it would "not do the least injury." He "urged the matter very earnestly, expressly taking on himself all the responsibility;" and it was on the 1st of October, the morning after the *successful* experiment, that Dr. Jackson refused to give a certificate "that ether was harmless in its effects," and yet, on this same day, the witness Barnes says, on being advised by Dr. Morton of the success of the operation, Dr. Jackson said to him: "You must go to Dr. Warren and get his permission to administer it in the Massachusetts General Hospital, and if possible, it should be on a capital operation." And he goes on to say that Morton strongly objected at first to going to the hospital; that everybody would smell the ether, and it would not be kept secret; but that, after learning something to disguise the odor, he agreed to apply to the hospital.

"We have already adverted to the fact that Dr. Morton, the very evening after the successful operation, suggested to Dr. Hayden that he would go to the hospital and get permission to try the ether there; that he went next morning to Dr. Jackson, and returned, saying Dr. Jackson would not give his countenance to the discovery, and it is admitted that Dr. Jackson refused him the certificate he wished for, and one of the reasons given is that he did not think him fit to be trusted. Is it then probable that he urged him to go to the hospital and there bring out his (Dr. Jackson's) great discovery? But James McIntire was also present on the 1st of October, when Dr. Morton returned and advised Dr. Jackson of the entire success of the experiment, and he says not a word of Dr. Jackson's proposing to Dr. Morton to try an experiment in the hospital. Your committee has already remarked in several other points of difference in the testimony of these two witnesses, and in each case as in this, they felt themselves constrained by the testimony of other witnesses and by the inherent character of the evidence to rely on the accuracy of McIntire rather than of Mr. Barnes, where these discrepancies occur.

"Another difficulty in sustaining the position assumed by Dr. Jackson forcibly impresses itself upon your committee. According to this, on the 30th of September, Dr. Jackson entrusted Dr. Morton with his discovery, and not only suffered him, but 'earnestly urged' him to use it, assuring him it was perfectly safe; Dr. Morton tried it on the same evening; his success was complete; he brought to Dr. Jackson the next morning conclusive evidence of all this, and Dr. Jackson refused him a certificate because he would not 'make himself responsible for anything and everything Morton in his ignorance might do with an agent liable to the most dangerous abuse,' while nothing is shown to shake Dr. Jackson's confidence in Dr. Morton since the previous day, or at all to

change his opinion of him, except the triumphant success of the operation which he reported and proved. On the 16th of October, the first operation was performed in the hospital, at which, as we have already shown, Dr. Jackson did not attend, and at which his name was not known. The second operation at the hospital took place on the 17th, Dr. Jackson taking no part in it by his presence or his counsel. Both operations were entirely successful, and both conducted on the part of Dr. Morton to the entire satisfaction of the surgeons of the hospital. But at this time Dr. Jackson's confidence in Dr. Morton, if he ever did confide in him, is wholly gone. He denies in the conversation with his neighbor and friend, Caleb Eddy, that under the influence of ether the flesh of a patient can be cut without pain; says Morton "is a reckless man for using it as he has; the chance is he will kill somebody yet;" and in the interval between the 30th of September and about the 23d of October, he declared that he did not care what Morton did with it, or how much Morton advertised, if his own name was not drawn in with it.

"It would seem that as Dr. Morton acquired eclat by his constant success, as he continually and rapidly rose in the estimation of other scientific men, he as continually and as rapidly sunk in the estimation of Dr. Jackson. The evidence of Francis Whitman, Mr. Caleb Eddy, and Hon. Edward Warren, show that, prior and up to the 23d October, Dr. Jackson spoke doubtingly of the effect of ether, and condemned its use; and there is no proof whatever that, within that time he lent the slightest countenance to Dr. Morton to sustain the discovery, and all his remarks, except those stated by Mr. Hitchcock to have been made to him on the 2d and 3d of October, tend to create distrust and destroy confidence both in the operator and the agent used. His favorable mention of it to Dr. Keep occurred *after* the 26th of October, the actual date not fixed, and was accompanied with a strong general charge of ignorance and recklessness against Morton, who was then in the full tide of successful experiment. This state of facts is, in the opinion of your committee, wholly inconsistent with the assumption that Dr. Jackson was the discoverer; that he had employed Dr. Morton to bring out the discovery; and that the experiments of Morton were tried on the responsibility of Dr. Jackson."

The error into which Dr. Jackson has fallen, as to the extent of the concessions which have been made him *by all* who have examined the evidence, is somewhat remarkable, in view of the reasoning and conclusions of these two very able reports upon the distinct points which he claims to have been universally conceded. While neither of them finds it necessary to approach or touch, what he avers to be "the only points contested by" his "opponents," namely: to use his own words "That I had not a sufficient reason for *drawing the inference that I did, as they admit, draw from my data.*" "And again, that by inducing an ignorant dentist, a man of no medical knowledge, to perform the mere mechanical operations made by my advice, and upon my medical responsibility, expressly assumed before witnesses, that I made him a co-partner, or joint discoverer, and that *he* made the first application of my discovery."

Your committee have looked in vain through all the papers before them, and find no such *admission*; nor do they find the controversy anywhere to turn upon what Dr. Jackson, in this paper avers to be the "*only*

points contested." On the contrary they find it denied, and to have been all along denied, that Dr. Jackson drew the *alleged inference*, or in any other manner *made the discovery*; or that he employed or engaged Dr. Morton to administer the ether vapor, on his, Dr. Jackson's responsibility. These are the questions which your committee find to be *the questions in issue*, and which have been, from the first claim made by Dr. Jackson, in issue. This erroneous statement some what weakens the credit of the paper for accuracy, but is to be regretted only in so far as it may tend to mislead the distinguished apostle of science in a foreign land, to whom it was directed.

Dr. Jackson's first claim to the discovery which appears on paper, is in a letter addressed to M. Elie de Beaumont, dated Boston, 13th November, 1846, which was opened and read to the Academy of Arts and Sciences at Paris, at their meeting, 18th January, 1847. It is thus introduced:

"M. Elie de Beaumont requested the opening of a sealed packet which had been deposited at the meeting of 28th of December, 1846, and which contained two letters from Mr. Jackson, of which the following are extracts: first letter—

"BOSTON, 13th November, 1846.

"I request permission to communicate through your medium, to the Academy of Sciences, a discovery which I have made, and which I believe important for the relief of suffering humanity, as well as of great value to the surgical profession. Five or six years ago I noticed the peculiar state of insensibility into which the nervous system is thrown by the inhalation of the vapor of pure sulphuric ether, which I respired abundantly: first by way of experiments, and afterwards when I had a severe catarrh, caused by the inhalation of chlorine gas. I have latterly made a useful application of this fact, by persuading a dentist of this city to administer the vapor of ether to his patients, when about to undergo the operation of extraction of teeth. It was observed that persons suffered no pain in the operation, and that no inconvenience resulted from the administration of the vapor."

In a second letter of December 1st, 1846, Dr. Jackson authorizes the opening of the above letter. The following is an extract from it, and the explanatory remarks of M. Velpeau: second letter—

"1st December, 1846.

"The advantage of the appreciation of the vapor of ether has been completely established in this country, and the agent has been used with great success at the Massachusetts General Hospital."

On this point Mr. Velpeau made the following remarks:

"The secret contained in the note which has been read is no longer a secret; the medical journals published in America and England have divulged it in the months of November and December. A letter from Dr. Warren, of Boston, communicated the information to me more than one month ago; and Dr. Willis Fisher, of the same city, proposed that I should try its effects at La Charité towards the middle of last December."

The present object of quoting these letters is to show the account which Dr. Jackson then gave of his experiment in 1841-'42. It, in truth, goes no further than prior experiments had made familiar to the medical faculty. The *Edinburg Medical Journal* of April 1st, 1847, speaking of it, says:

"In the administration of ether vapor there is, therefore, nothing new. Its narcotic and anodyne effects have been long well known to experienced and well-informed observers. The application of ether vapor, nevertheless, as an anodyne previous to surgical operations, suggested a mode of exhibition which, besides being new, has the merit of being more efficient than the methods in ordinary cases."

Dr. Jackson's trial in 1841-'42, as stated by him in the above letter, was a mere application of its well-known narcotic and anodyne properties. In a paper published by Dr. Jackson in the *Boston Daily Advertiser* of March 1st, 1847, he adds to the statement in his letter to M. Elie de Beaumont but one distinct fact—relief from the pain of his catarrh during the effect of the inhalation of the vapor of sulphuric ether, and its return presently afterwards. The same fact is stated as having occurred in Dr. Thornton's practice, first published in 1795-'96.

In a letter written by Dr. Jackson to Dr. Martin Gay, dated May 1, 1847, he professes to give an account of his "experiments and observations made several years ago on the inhalation of the vapor of pure sulphuric ether." He states his experiments as follows: The first:

"I moistened a cloth and laid it over my mouth and nostrils, and laid myself back in a rocking chair, and inhaled the vapor, noticing its effects on the system. The first impression was that of coolness, then a sensation of warmth and exhilaration, with a singular feeling of excitement in the chest. This was followed by a loss of consciousness, from which I in a short time awoke; soon afterwards I entirely recovered from the effects of the ether."

The second:

"Afterwards, still suffering from the effects of the chlorine, I thought I would try the ether vapor again, and for a longer time. I went, therefore, into my office, which is connected with my house, and taking the bottle of pure sulphuric ether from the laboratory, I soaked a folded cloth in it, squeezed it out slightly, and seating myself in a rocking chair, with my feet resting upon another chair, I commenced inhaling the ether from the cloth, which was placed over my mouth and nostrils, while my head was laid back against my chair, so that I was quite at ease in a fixed position. The effects of the inhalation were as before described, excepting that it made me cough at first. I was, therefore, led to believe that the paralysis of the nerves of sensation would be so great, during the continuance of the insensibility, that a surgical operation might be performed upon a patient under its influence, without giving him any pain; for the loss of consciousness was remarkable, perhaps resembling that of epilepsy more than any other kind of insensibility."

On the 18th of May, 1848, something more than a year afterwards, the contest about the discovery all the time going sharply on, and new facts daily developing themselves in the use and effects of sulphuric ether, Dr. Jackson addressed a letter to Joseph Hale Abbott, Esq., giving,

as he says, "a more minute statement, than I have heretofore published, of the effects produced upon me by sulphuric ether, when I inhaled it for relief from the distress occasioned by the inhalation of chlorine in the winter of 1841-2. And, also, a statement of the precise ground, which I have never published, of the idea then conceived by me that pure sulphuric ether could be used with safety and success to prevent pain in surgical operations. I will add that in my published letter to Dr. Gay, I neglected, through inadvertence, to state one of my principal reasons; which, as will be seen by his pamphlet, I had mentioned to him, in conversation, for the inference I drew from my observations. The experiment referred to above, in the course of which I observed that sulphuric ether produced insensibility to pain, was as follows: Having taken a bottle of pure sulphuric ether from my laboratory, I went into my office, soaked a folded cloth with it, squeezed it out slightly, and seated myself in a rocking chair. Having laid my head back against the rocking chair, with my feet supported by another, so as to give me a fixed position, I placed the cloth over my mouth and nostrils and commenced inhaling the ether. The effects perceived by me were at first a little coughing, a sensation of coldness, then warmth and fullness of the head and chest, exhilaration and giddiness, numbness and want of feeling in the feet and legs, a swimming sensation as if I had been afloat in the air, together with a loss of all feeling of the rocking chair in which I was seated—loss of all sensation of pain in the throat and chest—a state of reverie, and soon entire unconsciousness, for a space of time unknown to me. Recovering, I felt a sense of giddiness, but with no desire to move—found the cloth I had moistened with ether had dropped from my mouth—had no feeling of pain in the throat and chest, but began to feel a strange thrilling in the body. In a short time, I felt the soreness in the throat gradually returning, and the distress in the chest also, though much less than it had been before. From the cessation of all pain, and the loss of all feeling of external objects, a little while *before* and *after* the loss of entire consciousness, I was led to infer that the paralysis of the nerves of sensation would be so great during the continuance of the unconsciousness and the total loss of feeling, that a surgical operation could be performed upon a patient, under the influence of ether, without giving him any pain; and, therefore, I prescribed it, with entire confidence in the result."

Next follows, on the 18th of December, 1851, the narrative to Baron Von Humboldt, above set forth, but to which your committee think proper to refer again, specially, in this connexion. After stating the accidental inhalation of chlorine gas, and the means used to destroy its effects, he says: "The next morning my throat was severely inflamed, and very painful, and I perceived a distinct flavor of chlorine in my breath, and my lungs were still much oppressed. I determined, therefore, to make a thorough trial of the ether vapor, and for that purpose went into my laboratory, which adjoins my house in Somerest street, and made the experiment from which the discovery of anæsthesia was induced. I had a large supply of perfectly pure washed sulphuric ether, which was prepared in the laboratory of my friend, Mr. John H. Blake, of Boston. I took a bottle of that ether and a folded towel, and seating myself in a rocking chair, and placing my feet in another chair, so as to secure a fixed position, as I reclined backward in the one in which I was seated.

Soaking the towel in the ether, I placed it over my nose and mouth, so as to inhale the ether mixed with the air, and began to inhale the vapor deeply into my lungs. At first the ether made me cough, but soon that irritability ceased, and I noticed a sense of coolness, followed by warmth, fulness of the head and chest, with giddiness and exhilaration; numbness of the feet and legs followed; a swimming or floating sensation, as if afloat in the air. This was accompanied with entire *loss of feeling*, even of contact with the chair in which I was seated. I noticed that all *pain had ceased in my throat*, and the sensations which I had were of the most agreeable kind. Much pleased and excited I continued the inhalation of the ether vapor, and soon fell into a dreamy state, and then became unconscious of all surrounding things. I know not how long I remained in that state, but suppose that it could not be less than a quarter of an hour, judging from the degree of dryness of the cloth, which during this state of unconsciousness had fallen from my mouth and nose, and lay upon my breast. As I became conscious I observed still there was no feeling of pain in my throat, and my limbs were still deeply benumbed, as if *the nerves of sensation were fully paralyzed*. A strange thrilling now began to be felt along the spine, but it was not in any way disagreeable. Little by little sensation began to manifest itself, first in the throat and body, and gradually extended to the extremities, but it was some time before full sensation returned, and my throat became really painful.

“Reflecting upon these phenomena, the idea flashed into my mind that *I had made the discovery I had so long a time been in quest of*, a means of rendering the nerves of sensation temporarily insensible to pain, so as to admit of the performance of surgical operation on an individual without his suffering pain therefrom.”

These statements would have been entitled to much more weight in the estimation of your committee if all the facts alleged to have been observed, and conclusions drawn, in 1841-'2, as stated in the letter to Baron Van Humbolt, of December 18, 1851, had appeared in the letter to Elie de Beaumont of November 13, 1846, or even in that to Dr. Gay of May 1, 1847; but such is by no means the case. Each successive letter states the case more strongly than the last preceding, and the facts superadded in the later letters are those which alone give novelty and importance to the experiment.

In closing his statement of the last and final experiment in 1841-'2, in the part of the letter of December 18, 1851, to Baron Von Humboldt, last above set forth, Dr. Jackson says, “reflecting upon these phenomena, the idea flashed into my mind that *I had made the discovery I had for so long a time been in quest of*, a means, &c.” And he goes on to give formally and in detail the scientific deductions which he says were made at the time, and which then led him to the conclusion. If that statement be true, the discovery at that time, so far as private experiment and philosophical deduction could go, was as full and complete as it was on the morning of October 1, 1846, after Dr. Morton's successful operation on Eben Frost.

Now, if Dr. Jackson, in the winter of 1841-'2, did, in fact, make such discovery, and in earnestness, and in faith, and enthusiasm, was possessed with it, and with an animating desire to give it, and to give his name with it, to mankind, how happens it that no contemporary written paper

or pen-mark, under the hand of Dr. Jackson, or some one of his numerous friends or pupils, remains to attest the discovery? No private memorandum of his own, detailing his experiments and his scientific deductions from them; nothing, in case of sudden death, to connect his name with the discovery, and secure the discovery itself to the world?

The paper above referred to of November 13, 1846, written after the discovery had been in fact made—after the first capital operation had been successfully performed under the superintendence of Dr. Morton, and after Dr. Jackson had nearly made up his mind to claim the discovery as his own, was enclosed to M. Elie de Beaumont, with directions to file it in the Academy of Arts and Sciences of Paris, but not to break the seal until thereto directed. This paper, its seal and its custody, show that Dr. Jackson knew how to save a secret and yet preserve the evidence of a discovery; and it shows that he was not negligent or tardy, but hastened to take a formal contingent possession of this discovery in Europe before he witnessed, even as a spectator, a single operation under the influence of the new anæsthetic agent. It seems that he had not yet *fully* made up his mind to claim the discovery. He wanted further verification of the safety and efficacy of the anæsthetic agent before he took the decisive step of announcing it as his own. He therefore directed the letter making the claim to the discovery to be deposited, *sealed*, in the Academy of Arts and Sciences at Paris, not to be opened until he should direct.

The success of the pain-subduing agent from that day till the first of December, 1846, removed all doubt. The discovery was established. It already stood first in rank in the discoveries of the century, and fame, and honor, and rewards awaited the discoverer. Dr. Jackson, on that day and under these circumstances, wrote the letter last above copied, to M. Elie de Beaumont, directing him to open the sealed packet, and publish him, Dr. Jackson, to Europe, as the discoverer.

Considering the man and the discovery; the inestimable value of the discovery; the knowledge of the man, and his capacity to appreciate its value; his full application of it when satisfied that the discovery was in fact made, and his eager promptitude in then seizing and appropriating to himself at least all that was his; your committee cannot believe it possible that he should have been for a long time in earnest pursuit of the discovery, that he should have made it and perfected it in 1841–2 by experiment and deduction, that he should, for nearly five years have been in possession of it and with his full estimate of its value, and yet that he should not in its inception or progress *record it*, somewhere, at some time, on something more fixed and reliable than mere frail, uncertain, and mutable memory.

He knew well, if he thought on the subject at all, that but a thin veil separated the familiar and daily walks of the faculty from the spot where lay this hidden treasure. Did he not fear that some one would lift the veil? He knew it was but a step, and that a short one, from what was well known to the discovery itself. Did he not fear that some one would take that step and seize the prize which he could then so easily secure to himself forever? If he made the discovery in 1841–2, and was not yet prepared to disclose it, there was reason then for placing in the archives of some European and some American academy a sealed paper, giving an account of the facts observed, and the deductions drawn

at the time, that this much at least might be beyond the reach of rivalry and chance. But was there any just reason for this when he committed the sealed letter above referred to to M. Elie de Beaumont? The discovery was public and in public use in Boston for more than a month before that letter was written and sealed. The packet ship that carried that letter bore also the news of the discovery to Europe. What secret did this paper contain, that it must be kept under seal until the next arrival from America? Nothing, surely, which was public in Boston when the packet sailed; public also, of course, on board of the ship, and which must be public over all Europe within twenty-four hours after she should touch the Liverpool docks.

The sealed letter contained but one single secret not known over the European and American world, before it reached the hands of M. Elie de Beaumont, namely: that Dr. Charles T. Jackson claimed the discovery as his. And why did he did not then avow it, and proclaim it, instead of requiring his claim to remain under the seal of secrecy till the next arrival? His letter of 1st December gives the reason. It advises M. Elie de Beaumont that the success of the newly discovered anæsthetic agent is complete, and directs him to open, therefore, the sealed packet, and disclose its contents to the Academy. He did so; and Dr. Jackson was forthwith in possession of the discovery in Europe.

Until the first capital operation under the influence of the vapor of ether, which took place on the 7th of November, 1846, Dr. Jackson had evidently no fixed confidence in its success as an anæsthetic agent. Nor did this seem to satisfy him fully. Six days after this he sent his sealed statement to be deposited in the Academy at Paris, and not until many more successful operations had been performed under the superintendence of Dr. Morton, and until the last doubt of the incredulous was removed, did he direct publication to be made of his claim to the discovery. It is not to be credited that he had already possessed this discovery for five years, and knew its value and felt the enthusiasm of the discoverer; that he held it and believed in it and rejoiced in it for five years, and yet, that no word or line was ever written by him or any one of his numerous confidential friends to him, or for him, until the letter of November 13th, 1846, hinting even darkly at his possession of the mighty prize. And the difficulty is greatly increased when these striking facts are considered in connexion with this letter, embodying the first written statement of Dr. Jackson's alleged discovery. The accounts there given of his alleged experiments in 1841-'42, show no new discovery, but a mere repetition of a well-known prescription for its usual purpose, attended with effects also before that time well known. And the medical journals from the other side of the Atlantic, which returned with a review of the discovery, show this fact, and comprise all the merits of the discovery in the successful application of the vapor of sulphuric ether as an anæsthetic agent in an actual surgical operation. These journals, with this criticism and judgment, had been in the hands of the American public more than a month before Dr. Jackson published his amended and extended statement of March 1st, 1847, and more than three years before his letter of 18th December, 1851, to Baron Von Humboldt, the statement in which, if it be believed, supplies all deficiencies except the want of a public experiment, or one at least made in the presence of witnesses. But it is strange, if that statement be

true, that Dr. Jackson, from 1841-'42, to September 30th, 1846, never applied that crowning test; that after he professed to have perfected the discovery by philosophical experiment and induction, he suffered it to sleep for five years, during which time he never made another experiment of any kind on himself or on another person, or even on a domestic animal; that, from first to last, he never made an experiment of any kind in presence of witnesses. Indeed, for several years prior to 30th September, 1846, the use of sulphuric ether appears to have ceased in his laboratory, for in his letter to Baron Von Humboldt, giving his version of the interview with Dr. Morton on that day, he says:

"He (Morton) asked me to let him take the bottle of sulphuric ether which I had just shown him; but *since it had been standing in the laboratory for some years, I feared it might have become deteriorated.* I therefore advised him to go to Mr. Burnett, one of our best apothecaries, and get some pure sulphuric ether."

Dr. Jackson evidently feels that the long delay, from 1841-'42 to 1846, in bringing out his alleged discovery, and the sudden and abrupt manner in which he professes to have placed it in the hands of a man whom he stigmatizes as an "*ignoramus*" and a "*quack*," require explanation; and in his letter to Baron Von Humboldt, he gives the following:

"It is obvious enough to those who know the circumstances, why I engaged an ignorant man to introduce my discovery. I had already, before Mr. Morton came to Boston and set up as a dentist, endeavored to engage more responsible persons to make trial of the ether in their practice, but they declined doing so, knowing that the medical and toxicological books declared it to be a *dangerous experiment*, while I *insisted that it was not dangerous.* They thought that in their medical capacity they would incur responsibility for any accidents that might happen to the patients, and hence feared to act."

If Dr. Jackson made, in truth, this great discovery in the winter of 1841-2, and was conscious of its truth and its value, the above statement, in the opinion of your committee, falls far short of a sufficient explanation of the fact that he so long delayed announcing it to the world. According to him, the discovery was complete as soon as he awoke from the state of unconsciousness into which he had been brought by inhaling the ether vapor. All was complete, except to bring it out by an actual experiment in the presence of the surgical faculty; as complete, so far as he was concerned, as it was on the morning of the 30th of September, 1846. Now, can it be believed, that during the more than four years that intervened between the time of the alleged discovery and the public experiments of Dr. Morton, no available means offered themselves to Dr. Jackson to test it, and disclose it, and prove it to the world? He says, "and it is well known that the vapor of sulphuric ether was sometimes inhaled by the young men at college." Could he not, after this discovery, have been present, and after leading the way himself, have induced some of them to inhale it until it produced insensibility? Could he not have himself inhaled it before his friends and associates of the hospital, and satisfied them of its safety by his speedy recovery, of its complete suspension of all sensibility to pain by usual tests with which he was familiar, or even something more decisive, as the actual cautery

applied for an instant to some sensitive part? Conviction would have followed a simple and safe exhibition like this, and his associates, members of the faculty of the hospital, would not have hesitated to further test the discovery by surgical operations. Indeed, we cannot suppose that they would have hesitated to do so at once on his mere statement of the experiment upon himself, as given to Baron Von Humboldt, and his assurance that it produced anæsthesia, and was attended with no injurious effects. They did not hesitate to grant it to the representations of Dr. Morton—a young man almost a stranger to the faculty. Dr. Jackson, it seems, too, believed they would grant it thus readily, for he says he directed and urged Dr. Morton to go and ask it, to which he says Dr. M. reluctantly consented; and Dr. Jackson gave him no written paper, and spoke no kind word in his behalf to any of the faculty. With the extraordinary facilities for bringing out such discovery, which Dr. Jackson had at his very door; with his own high scientific position, which enabled him fully to command them, your committee cannot believe that he made the discovery, and was compelled by a kind of necessity so long to withhold it from the world. Dr. Jackson shows no such necessity. Nor can your committee believe that he had the secret, and held it for any reason or from any motive, a buried talent for nearly five years; that he witnessed from time to time, during all that long period, the agony of the human frame under the tortures of the canter, the scalpel, and the knife, and remained silent, while he had, and knew he had, sovereign power over pain, and could banish it instantly with a breath.

But Dr. Jackson, in his own conduct and bearing in reference to this discovery, and its verification and presentation before the public, from the 30th of September, 1846, down to the time that it was fully established, proves that he was not, and did not believe himself to be, the discoverer. Giving Dr. Jackson the full benefit of the favorable opinion which he entertained of Dr. Morton, before he had determined to become his competitor for the honor of the discovery, which appears by his certificate, namely, that he was a young man of marked energy and intelligence, and very creditable acquirements, in such branches of science as pertained to his profession, still it is not within the range of probability that Dr. Jackson, had he possessed the discovery, would have intrusted him or any one else to test its merits in the manner and under the circumstances in which he professed to have intrusted it.

He unquestionably believed Dr. Morton ignorant of sulphuric ether, its properties, and its use, and supposed he had never thought of its application in the manner proposed. Surely he would not select a man, ignorant of the anæsthetic agent itself, to perform the delicate operation of first testing its efficacy and safety. He knew how much depended on its first exhibition, and he also knew that it required science and skill to render the experiment successful, and to avoid danger and disaster. Sulphuric ether would produce insensibility to pain, too little of it would make the experiment ineffectual and expose the operator to ridicule, too much, or the proper quantity unskillfully administered, would produce asphyxia, perhaps death. Under these circumstances Dr. Jackson could not have trusted a young man, without medical knowledge, and without the knowledge of sulphuric ether, or its effects, to conduct his first great experiment, and he himself think it not worth

his while to be present. But, according to his own statement, he gave to Dr. Morton no sufficient instruction correspondent with the mighty mission on which he was sent. He gave all the instruction which he saw fit to give in ten or fifteen minutes, he *walking*, and his pupil, according to his last statement, *capering* about the laboratory. He despatched him, however, on his mission of mercy, to banish pain from the human race, and he himself quietly took his seat again in his laboratory, and troubled himself no further about the result.

Dr. Jackson, had he thought on the subject, knew well that the effects of ether vapor would be different on different persons, and even on the same person in different states of the system. Had he been about to bring out his own discovery, the crowning honor of his life, he would not only have attended in person to the skilful administration of the anæsthetic agent, but he would have been especially careful in the selection of a subject. On the contrary, if this was his experiment, he directed its trial on the worst subject conceivable, a nervous and refractory patient who refused to submit to an operation. That was what Dr. Morton professed to have on hand, and in reference to which Dr. Jackson says he disclosed his discovery and gave directions for its application. The first operation was really performed on a fortunate subject, such a one as Dr. Jackson might well have selected; but he knew nothing of this, or of anything other and further than the refractory patient. But Dr. Morton returned to Dr. Jackson's laboratory the next day, and reported the success of the experiment. Dr. Jackson, according to the testimony of Barnes, one of his witnesses, is quite unmoved, and expresses no surprise, but advises, and as Dr. Jackson himself says, urged Dr. Morton to go to Dr. Warren and get his permission to try it in a capital case at the hospital. Now, if Dr. Jackson were really the discoverer and had employed Dr. Morton to make the experiment *for him*, and as his agent, why did he send *him*, or advise or urge *him* to go to the hospital at all? He refused him a written certificate that the anæsthetic agent which he used was harmless, because, as his former counsel, the Messrs. Lords, said for him, of an "unwillingness to figure in Morton's advertisements, and his prudence in refusing to make himself responsible for anything and everything Morton in his ignorance might do with an agent so liable to the most dangerous abuse." How came he, then, to trust Dr. Morton with this agent? Why did he urge him to go with it to the hospital? He says in his letter to Mr. Elie de Beaumont that the experiments in the hospital were his. He had his anæsthetic agent tested there in a capital experiment. He sent Dr. Morton to Dr. Warren to ask its admission in the hospital; and yet refused Dr. Morton a written certificate of the safety of the agent because he would not "*make himself responsible.*" And who was responsible? We have no hesitation in saying that Dr. Jackson's claim to these experiments is unfounded, and his statements so far untrue, or he was guilty of bad faith towards Dr. Morton, and especially toward the faculty of the hospital.

But the question recurs, why did he urge Dr. Morton to go to the hospital at all? He does not pretend to have employed him as his sole and only agent to bring out his discovery. On the contrary, according to the statement of Barnes, his witness, Dr. Jackson on the 1st of October, when applied to by Dr. Morton to keep the discovery secret, replied "No! I will have no secrets with my professional brethren." He was

under no obligations to Dr. Morton. Why did he send him to the hospital? He had trusted Dr. Morton in one case only; if he did not think it worth his while to attend at the hospital himself and see in person to the administration of the anæsthetic agent in a capital case, he might have trusted it to some one of the learned surgeons of the hospital to whom he could in a few minutes time have communicated all the information which he gave to Dr. Morton but the day before. He would then also have been free from all responsibility, which, though refused *in writing*, he says was *assumed before witnesses*, for what, in the language of Dr. Jackson's counsel, "*Morton in his ignorance and rashness might do with an agent so liable to the most dangerous abuse.*" This would have been consistent. If he engaged a dentist to use his discovery when he should *extract a tooth*, would he not have engaged a surgeon to use it when he should amputate a limb? For what possible reason, if his statement be true, could he send the dentist, who was profoundly ignorant of his anæsthetic agent, to administer it in a capital surgical operation among learned and skilful men, and at the same time advise him how to disguise it so that they might not know what he was using? He was determined to have no secrets with his professional bretheren, and that he would tell them all that he had told Dr. Morton; yet he put Dr. Morton in possession of a convenient means of disguising the agent, and keeping secret the *actual discovery*. This was consistent and right if it were Dr. Morton's discovery; but a self-contradiction on the instant, almost in the same breath, if it were his own. It is clear to us, that at this time Dr. Jackson did not claim the discovery, but held himself in such position that he might at any moment assert an interest in, or repudiate and condemn it. Sometimes the experiments of Dr. Morton were successful, and Dr. Jackson spoke well of the discovery to a few special friends, as Mr. Hitchcock and Mr. Sumner. Sometimes the experiments were unfortunate, as in the case of the boy supposed to be poisoned, and Dr. Jackson doubted the success of the discovery, and censured Dr. Morton, as in his conversation with Caleb Eddy and Francis Whitman.

"On the 16th of October," says the former committee, "the first operation was performed in the hospital, at which, as we have already shown, Dr. Jackson did not attend, and at which his name was not known. The second operation at the hospital took place on the 17th, Dr. Jackson taking no part in it by his presence or his counsel. Both operations were entirely successful, and both conducted on the part of Dr. Morton to the entire satisfaction of the surgeons of the hospital. But at this time Dr. Jackson's confidence in Dr. Morton, if he ever did confide in him, is wholly gone. He denies in the conversation with his neighbor and friend, Caleb Eddy, that under the influence of ether the flesh of a patient can be cut without pain; says Morton 'is a reckless man for using it as he has; the chance is he will kill somebody yet;' and in the interval between the 30th of September and about the 23d of October, he declared that he did not care what Morton did with it, or how much Morton advertised, if his own name was not drawn in with it.

"It would seem that as Dr. Morton acquired eclat by his constant success, as he continually and rapidly rose in the estimation of other scientific men, he as continually and as rapidly sunk in the estimation of Dr. Jackson. The evidence of Francis Whitman and Mr. Caleb Eddy

show that, prior and up to the 23d October, Dr. Jackson spoke doubtfully of the effect of ether, and condemned its use; and there is no proof whatever that, within that time, he lent the slightest countenance to Dr. Morton to sustain the discovery, and all his remarks, except those stated by Mr. Hitchcock to have been made to him on the 2d and 3d of October, tend to create distrust and destroy confidence both in the operator and the agent used. His favorable mention of it to Dr. Keep occurred *after* the 26th of October, the actual date not fixed, and was accompanied with a strong general charge of ignorance and recklessness against Morton, who was then in the full tide of successful experiment. This state of facts is, in the opinion of your committee, wholly inconsistent with the assumption that Dr. Jackson was the discoverer; that he had employed Dr. Morton to bring out the discovery, and that the experiments of Morton were tried on the responsibility of Dr. Jackson.

"On the 30th of September, the first successful operation took place. On the 1st of October, Dr. Morton applied to R. H. Eddy, agent for patents, to aid him in procuring a patent for the discovery. Mr. Eddy took the case into consideration, and did not see Dr. Morton again until the 21st. In the mean time Dr. Morton's experiments had been attended with the most flattering success. Two operations had been performed in the hospital to the entire satisfaction of the faculty, and the discovery had acquired a footing in the medical world; and prior to the 21st, but the precise day is not stated, Dr. Jackson had a conversation with Mr. Eddy, was informed of the application of Dr. Morton for a patent, and claimed that he had some connexion with Dr. Morton in making the discovery. He called on Dr. Morton on the 23d, and it was then arranged that Dr. Jackson was to have \$500 for the information he had given Dr. Morton, if ten per cent. on the proceeds of the patent would produce that amount.

"This arrangement between the parties, settled by and between themselves in a private conference, proved by their subsequent conversation with Mr. Eddy, and not now denied, shows conclusively the view that each had of his respective participation in the discovery. It was between them both distinctly a business transaction—an affair of dollars and cents, and as clearly Dr. Jackson called and introduced the conversation—not to assert his rights to the discovery—not to inquire as to its success, for of this public report had advised him—not to give any advice or caution as to its further use, but to claim a compensation in money for the advice and information he had given to Morton on the 30th of September; and \$500, if ten per cent. on the proceeds of the patent would produce it, was agreed upon as the sum to be paid for that information. This conversation and agreement is entirely consistent with the view we have thus far taken of the case, but it is wholly inexplicable on the ground assumed by Dr. Jackson."

This agreement being concluded, Dr. Jackson went home, as he himself admits, and charged Dr. Morton \$500 on his books for the information which he had given him. This is the first entry or pen mark made by Dr. Jackson with regard to this discovery which has come to the knowledge of your committee. It is true Dr. Jackson insists that the arrangement, in pursuance of which the entry was made, was obtained from him by the falsehood and subtlety of Dr. Morton. The assertion

is easily made, but of little value against the contradictory statement of Dr. Morton, and the whole sequence of facts going fully to sustain that statement. A written paper signed by Dr. Jackson on the 27th of October, 1846, sustains the arrangement resulting in the entry by Dr. Jackson; but this, also, he attempts to invalidate on the alleged ground, that it was altered without his knowledge or consent by Mr. Eddy, the Patent Solicitor, after he had agreed to sign it, and before he signed it, and that thus a false paper was palmed upon him. This statement is also wholly unsupported and at variance with proof and probability. The former committee, in speaking of the conversation testified to by Mr. Eddy, and the arrangement that Dr. Morton should pay Dr. Jackson \$500, if ten per cent. on the proceeds of sale would amount to it, say:

“But the representations and advice of Mr. Eddy, the common friend of the parties, modified their arrangement. He represented to Dr. Morton that Dr. Jackson, from having given him the information and advice spoken of on the 30th of September, was entitled to participate in the patent as a joint discoverer. That if he were not joined in the patent, the fact of his giving that information would be used to impeach the patent, and that if Dr. Jackson were joined as a patentee, his name and his advice and assistance would be useful in bringing out the discovery and giving it celebrity. With these arguments Dr. Morton was satisfied, and consented that Dr. Jackson should be named as a joint discoverer in the patent. Mr. Eddy also advised with Dr. Jackson, who informed him that, ‘by the laws of the Massachusetts Medical Society, he would be prevented from joining with Dr. Morton, in taking out a patent, as he would be expelled from the association, if he did so. He further stated that he intended to make a professional charge of \$500 for the advice he had given him, and that Dr. Morton had acceded to this; that he did not wish his name coupled with Dr. Morton in any manner; that Dr. Morton might take out a patent, if he desired to do so, and do what he pleased with it.’ At a subsequent interview, prior to the 27th October, Mr. Eddy urged Dr. Jackson to waive his objections to associating with Dr. Morton, as ‘I was confident that he was mistaken in his views as to what would be the action of the medical association; that Dr. Morton could not properly take out a patent without him; and that by joining in the patent he would, of a certainty, be obtaining credit as a discoverer; whereas, should he not do so, he might lose all credit, as in the case of the magnetic telegraph, which I understood from Dr. Jackson he had suggested to Professor Morse.’ The objection as to the medical society was removed, on consultation with Dr. Gould. Dr. Jackson consented to join in the patent, and it was agreed that he should have ten per cent. of the proceeds for his interest in it.”

In settling the question to whom belongs the honor of the discovery, it is unimportant whether Dr. Jackson did or did not desire to give it freely to the world. Such desire, if he had it, did not make the discovery his; and if it were not in fact his, the desire is without merit. In one point of view only is the patent question and contest relevant, namely: to show what the parties understood of their several rights; nor would we touch upon that, after the above examination of the subject by the former committee of the House, but to add to it another item of evidence. After this controversy had arisen and waxed warm, on the

— day of January, 1847, Messrs. Loring & Hays, the counsel for Dr. Jackson, addressed a letter to Dr. Morton, of which the following is an extract :

“It seemed best that the differences between Dr. Jackson and yourself should not be made public; on the contrary, that it should be generally understood the difficulties were in the course of adjustment. * * * We have uniformly said, when inquired of, that we were making arrangements that we hoped would distribute the profits of the discovery in such a manner as would be satisfactory to all parties.

“Under the present circumstances of the case, we think the least that, in justice to yourselves and Dr. Jackson, you can offer, is 25 per cent. of the profits arising from the invention, both at home and abroad, in settlement of his claim upon you. * * *

“It is our wish to settle the matter amicably, if possible. We hope you will see, by our suggestions, that we wish only to have a fair distribution of the profits of a discovery made among those who cannot, if they disagree, effectually sustain the patent; and which, if sustained, *promises to give to all parties large sums of money for their united co-operation.*”

The proposition was rejected by Dr. Morton. This transaction shows the view that the parties each entertained, at that time, of his rights in the discovery; and it does not, in the opinion of your committee, place Dr. Jackson in a favorable position to denounce the patent, in the profits of which he desired thus to participate, as “*an infamous speculation on human suffering.*”

The former committee proceed to say :

“Your committee do not feel that on this question of fact the parties ought to be bound by the legal conclusions of their common friend, Mr. Eddy, or by the papers which they executed in pursuance of his legal advice. But they do consider the communications made by them at the time to Mr. Eddy, the mutual agreement of the parties between themselves as touching the discovery, and the facts admitted by them on the consultation, as matter of the utmost importance and significance. A voluntary agreement took place between the parties on that day, of which both must have understood the full force and effect, and to which neither seems to have been, or probably could have been, impelled by advice or counsel. It was that the whole right to use the discovery under the patent should be and was assigned to Dr. Morton, he paying to Dr. Jackson ten per cent. on all sales for licenses.

“Your committee cannot here fail to remember the unqualified terms of contempt and reprobation in which Dr. Jackson had, during the preceding part of the month down almost to the very date of this arrangement, spoken of Dr. Morton and his alleged ignorance and recklessness in the use of this agent. They cannot conceive it possible, if he felt himself to be the true discoverer, that he would, by solemn contract, relinquish all power over his discovery, and place it solely in the hands of a man of whom he thought so illy. Dr. Jackson indignantly repels the idea that it was done for the purpose of gain; and we think it could not be the case, as the pittance reserved to him, if he conceived himself the discoverer, was so despicably small. And how could he hope to acquire *fame* by abandoning the most important discovery of the age?—

one which, if it were his, and if under the auspices of his reputation, with his skill and science, it were presented to the world, could not fail to place him on the highest scientific and professional eminence. How could he hope to acquire fame by thus surrendering all control over the discovery, and placing it in the hands of such a man as he had represented and still represents Dr. Morton to be?

"A careful examination of the above detailed acts and conversations of the parties down to the 27th of October, about which it would seem to your committee there could be no doubt, renders it clear, almost to demonstration, that neither Dr. Jackson nor Dr. Morton, nor any of those who had witnessed or aided in the operations, supposed that Dr. Jackson was entitled to the merit of this discovery, or any other merit than that of having communicated important information to Dr. Morton; and if we trace the conduct of the parties further, this opinion is but confirmed.

"On the 7th of November, a capital operation was performed by Dr. Hayward in the hospital, the patient being under the influence of sulphuric ether, administered by Dr. Morton. Dr. Warren being informed by Dr. Jackson that he suggested the use of sulphuric ether to Dr. Morton, invited him to attend and administer the ether. He declined, for two reasons: one was that he *was going out of town*; the other, that he could not do so consistently with his arrangements with Dr. Morton; so the first capital operation, under the influence of ether, was successfully performed, Dr. Jackson not yet thinking fit to attend. But in a communication published in the Boston Daily Advertiser, of March 1st, 1847, he says: 'I was desirous of testing the ether in a capital operation, and Dr. Warren politely consented to have the trial made; and its results proved entirely satisfactory, an amputation having been performed, under the influence of the ethereal vapor, without giving any pain to the patient.' It strikes the mind with some surprise that Dr. Jackson should claim this operation as an experiment made by him at his request, and to satisfy himself of the efficacy of the 'etherial vapor' in a capital operation, when the only connexion which he had with the operation was to decline attending it when specially invited. Indeed, so entirely did he omit to inform himself on the subject of this experiment, which he declares to be his, that, in the above communication, he names Dr. Warren as the surgeon who performed the operation, which was, in fact, performed by Dr. Hayward.

"Another surgical operation was performed at the Broomfield House, on the 21st of November, the ether again administered by Dr. Morton. Dr. Jackson was then present for the first time, on invitation, but merely as a spectator. On the 2d of January, 1847, an operation was performed in the hospital, when Dr. Jackson attended, and brought with him a bag of oxygen gas to relieve the patient from asphyxia, in case it should supervene. Nothing of the kind occurred, and the gas was not used. This is the first and only act of Dr. Jackson's made known to your committee, which implied that he had any duty to perform in the administration of the ether, or that he rested under any responsibility as to its effects."

Among the papers not heretofore presented, Dr. Jackson has brought before your committee a letter of George T. Dexter, dated December 19, 1851, in which the writer states that Dr. Jackson, in the year 1842 com-

municated to him his discovery of sulphuric ether as an anæsthetic agent, and spoke of it freely, earnestly, and confidentially, as a means of alleviating much human suffering in surgical operations; that in the winter of 1842, the witness called on Dr. Jackson in his laboratory, who told him he continued his experiments with sulphuric ether, and that it was likely to prove all that he had anticipated or more.

We hear nothing however, from any other quarter, of continued experiments by Dr. Jackson, after that of the winter of 1841-2. Dr. Jackson himself does not profess to have made any.

There is also a letter from D. I. Browne, who says that, in 1845, Dr. Jackson stated to him that he had discovered in the vapour of pure sulphuric ether a preventive of pain in surgical operations, and that he spoke of its effects in such operations with *enthusiasm*. To both these gentlemen he made his communications in confidence, and no written statement of it appears from either of them until December, 1851, four years after the discovery was a subject of public contest, and not until after the scientific papers had been for nearly as long filled with the statements and evidence of the conflicting claimants. Without imputing any willful aberration from truth to either of the above named persons, your committee think it but just to remark that their evidence, so far as correctness of memory is concerned, is entitled to much less weight than it would have been if given while the controversy was fresh and rife, and before full publication. There is certainly great danger that a witness, who has read with feelings of partiality the mass of evidence exhibited in this controversy, and the conflicting publications of the parties and their friends, will, when he attempts to state a conversation relative to the subject, which occurred six or nine years ago, blend with his recollection of it the statements and the evidence which has been four years with it in his mind, and thus cause the one to be colored by or mistaken for the other. For reasons akin to this, the English courts of chancery will not permit a witness to be examined in a cause after publication of the evidence. And in the opinion of your committee, this evidence weighs but as dust in the balance against the evidence growing out of the acts and omissions of Dr. Jackson, which your committee have already considered. Dr. Jackson may have told these persons all that he wrote to M. Elie de Beaumont on the 13th of November, 1846, but even this your committee think improbable. He may have repeated in his own person the speculations of Dr. Beddoes and Sir Humphrey Davy, connected with the experiments of Dr. Townsend. Dr. Wells did this, and even more. This knowledge of these speculations had become the common possession of the medical mind, a common highway, in which it was not discovery to travel. And it involves no improbability to suppose that these persons were mistaken as to the *exact statement* that Dr. Jackson made them, and that it is colored and extended in their letters.

The last deposition of Dr. N. C. Keep, laid before the former committee of the House shortly before the coming in of their report, shows what wild freaks feeling and imagination sometimes plays with human memory. He testifies as follows:

"I became associated in the business and practice of dentistry with Dr. Morton on the twenty-eighth day of November, in the year 1846. On the next day we were about to prepare an advertisement for publication, when Dr. Augustus A. Gould called at our rooms. Being pressed with

business, I requested him to write the advertisement, with which request he complied. After he had written it, which he did at his own house, he brought it to me, and we read it together. In it the discovery of etherization, without any suggestion having been made by me to that effect, was ascribed in explicit terms to Dr. Charles T. Jackson. Dr. Gould pointing with his finger to the words in which this ascription was expressed, said to me 'that will please Jackson.' I then showed the advertisement to Dr. Morton, and we read it together. He then exclaimed with emphasis, 'that is good; I like that; I'll take it to the printer.' Copies of the advertisement were made under the direction of Dr. Morton, and, as I supposed at the time, without alteration; and published by his order in three evening newspapers. On seeing the advertisement in the *Evening Traveller*, on the evening of the same day, I was greatly surprised to find that the words which ascribed the ether discovery to Dr. Jackson had been struck out. The next morning I called the attention of Dr. Morton to the fact, and asked him why he struck out those words. He hesitated, and seemed not to know what to say, when I said to him: 'Morton, why do you quarrel with Jackson? You injure yourself, and injure the cause.' His reply was: 'I wouldn't if he would behave himself. The credit of the discovery belongs to Dr. Jackson; Jackson shall have the credit of it; I want to make money out of it.'

"I stated the foregoing facts to my family on the aforesaid evening, and afterwards to other individuals. I have heretofore declined voluntarily testifying to them, but consider that I have no right, upon a call of such a nature as is now made upon me, to withhold the testimony.

"N. C. KEEP.

"BOSTON, *February 8, 1849.*"

On this the former committee remark:

"When this deposition was received, the chairman of your committee showed it to Dr. Morton, who in a few minutes brought to him a bound book entitled 'Miscellaneous Notes.' On the 91st page was a manuscript in the handwriting of Dr. A. A. Gould, written evidently on the outside sheet of a letter addressed to Dr. A. A., and post-marked 'Washington city, D. C., July 9,' from all which it was most manifest that this was the original draft of the advertisement testified to by Dr. Keep. This paper contrasted with the evidence of Dr. Keep as the contents of an original draft, fixes in the minds of your committee the just value of this species of evidence. This paper is as follows:

"'The subscribers, having associated themselves in the business of dental surgery, would respectfully invite their friends to call on them at their rooms, No. 19, Tremont Row; they confidently believe that the increased facilities which their united experience will afford them of performing operations with elegance and despatch, and the additional advantage of having them performed without pain, by the use of the fluid recently invented by Doctors Jackson and Morton, will not only meet the wishes of their former patients, but secure to them additional patronage.'"

Your committee also examined the original paper, which is the subject of the above deposition, and are satisfied that it has never been altered by erasure or interlineation since it came from the hands of Dr.

Could. The entire narrative, therefore, of Dr. Keep that the paper originally conceded the whole merit of the discovery to Dr. Jackson, the conversation relating to *that*, the alteration by Dr. Morton before publication, the reproof given him by the witness, and Dr. Morton's reply, still insisting that the credit was due to Dr. Jackson, and that he should have it, is all shown to be false from beginning to end, the mere creation of an excited imagination. Not an error in regard to the force of terms, as is probably the case in the two former depositions considered above, but a statement which, by a fortunate reference made in it to a written paper, is proved to have no foundation whatsoever in truth.

Your committee cannot better present their views of the mass of evidence filed before the former committee of the House than by here embodying in its connexion so much of their report as relates to it. They say :

"The testimony of Don P. Wilson and J. E. Hunt, who were assistants in Dr. Morton's shop for a few months, commencing in November, 1846, is adduced to impeach the evidence of Leavitt, Spear, and Hayden, by *their* alleged declarations, and the title of Dr. Morton to the discovery, by his declarations. This is a species of testimony against which the books on evidence especially put us on our guard. It is a sweeping kind of evidence which covers everything ; and if the imputed conversation be *private*, or if it be general, (as he "often said," or "always said,") it is often difficult to subject the evidence to the ordinary tests of surrounding circumstances and inherent probability, so as to fix its value. There is enough, however, in these depositions to show that they are of but little weight. It is to be remembered, in the first place, that they are in direct contradiction to the testimony of Whitman, Spear, Leavitt, and Hayden, and they contradict by strong implication the testimony of Mr. Metcalf and Mr. Veightman, the character of all and each of whom is most satisfactorily vouched. The testimony of these two witnesses cannot be true, unless the four first above named entered into a conspiracy to carry a point by perjury ; but, as to them, we have examined their evidence—we have tested it by its agreement with surrounding circumstances, and we are satisfied of its truth.

"This of itself would be enough to dispose of the testimony of Wilson and Hunt ; but it is proper to look at the inherent character of their evidence.

"Wilson, in the commencement of his deposition, *swears*, by way of recital, that Dr. Charles T. Jackson was the discoverer of the application of ether to produce insensibility to pain in surgical operations ; and, among other things, he says, '*Morton first claimed the discovery to be his own*' in February, 1847. To say nothing of the looseness and total want of caution with which the fact of the discovery is stated—a fact of which Mr. Wilson certainly had no knowledge whatever—he testifies directly against the recorded fact in the second particular, for Dr. Morton did *claim* the discovery as early as September 30, 1846, and his claim was given to the world the next day in the public prints. *His* claim, and *his* alone, was known to the surgeons of the hospital during the month of October, and his public circulars and the numerous answers to them, which he has exhibited to the committee, show that during all that time, and at all times, he claimed the discovery publicly and to the world as his own. The witness goes on to say : 'In the administration

of the ether I was guided by and solely relied upon the advice and assurances of Dr. Jackson, received through Morton. *We never dared to follow Morton's own directions*'—and adds that, if they had, the consequences would probably have been fatal and etherization a failure. And further, that he never knew Morton *'to apply it to a patient in the office.* This was from a most apparent fear and shunning of responsibility."

"Now as to the advice and assurances of Dr. Jackson, alleged to have been received from time to time through Dr. Morton, we have no reason to suppose that any such repeated intercourse and communication took place during that time, and we have no evidence of the actual fact of any such meeting and instructions. On the contrary, there is evidence of unkind feelings existing on Dr. Jackson's part towards Dr. Morton; and in the opinion of your committee the testimony of Dr. Keep *indirectly* contradicts the testimony of Wilson on that point, and *directly* upon each of the other points last named. Dr. Keep's object and the tendency of his evidence is to depreciate Dr. Morton; but for faults the very reverse of those with which he is charged by Wilson, namely, a *'rash recklessness,'* instead of *'a most manifest fear of responsibility,'* in administering the ether; and he evidently is impressed with the belief, and designs to let it be known, that the success of etherization depended upon his skill and prudence. He says *'it was his (Morton's) practice during that time to administer the ether* without any adequate provision for the admission of atmospheric air; *and whenever operations were performed by other persons in the office,* and under his supervision, he directed the application in the same way, in consequence of which many of the operations were unsuccessful, and great distress and suffering were induced.' Dr. Keep then states that he made ample provision for the admission of atmospheric air, and advised the assistants to do the same thing; but *'they being influenced by his (Morton's) directions and known wishes, did not at all times follow my advice.'* Not a word is said by Dr. Keep of any advice or directions coming from Dr. Jackson, which, if it had actually occurred, must have been known to him, and would have formed an important item in the current incidents of the time. The evidence of these two witnesses stand thus. They were in the office of Dr. Morton, during the same 'thirty days,' Keep the superior, Wilson the assistant. Keep says Dr. Morton was in the habit of administering the ether in a particular manner, and that he was *rash and reckless.* Wilson says that he never administered it at all, and that he was *timid* and shrank from responsibility. But the surgeons of the hospital agree with neither one nor the other, but show that he repeatedly administered it in the hospital *himself*, to their entire satisfaction, and with entire success. Wilson says the assistants in the office would not follow the directions of Dr. Morton, but relied upon such as were brought from Dr. Jackson. Keep says nothing about instructions from Dr. Jackson, but that the assistants in the office were influenced by the directions and known wishes of Dr. Morton, so that his salutary advice and remonstrances were often of no avail. Wilson says Dr. Morton explained to him, an assistant in his office, very fully all the particulars of the discovery and patent; but to Dr. Keep, his partner, he extended no such confidence. We leave these two depositions to be viewed in their strong contrast; and as to the testimony of Don P. Wilson, considering

its inherent improbability, the suspicious nature of the species of testimony to which it belongs, the manner in which it is contradicted directly and indirectly by the evidence of Dr. Keep; and when we further consider that it is directly opposed to the evidence of Whitman, Spear, Leavitt, and Dr. Hayden, and indirectly to that of Metcalf and Weightman; and that it is also in direct conflict with numerous public printed cards and notices of the day, we feel that we cannot give it the slightest weight or consideration.

"The testimony of John E. Hunt is subject to the same objections with those of Don P. Wilson, and other objections which your committee will now proceed to notice. In order to bring out a declaration on the part of Spear, that he had never taken the ether, he represents him as taking it one evening, and in the excitement produced by it, seizing upon a countryman present, and handling him roughly. The apology which Spear makes to the countryman is, '*this was the first time he had ever taken the ether*;' not that it was the first time ether so effected him, or that the rudeness was committed under the influence of ether, but that it was the first time he had ever taken the ether—a fact which had little to do with the act of rudeness, and was a most irrelevant apology. But the inquiry thereupon made by Mr. Hunt is most remarkably inconsequent; he having heard Spear say that it was the first time he had ever taken ether, asks him if it 'ever affected him in the same way before.' Now, if he had been pressing Spear with a cross examination, in order to entrap him in some important admission, the inquiry might, perhaps, have been made; but it was *then* a matter of no importance whatever whether Spear had breathed the vapor of ether or not, and it becomes in the highest degree improbable that both branches of the conversation, so inconsistent with each other, actually occurred; and as the statement contradicts the testimony of so many respectable witnesses, and is in itself improbable, your committee do not feel bound to give it credence. Again: in a walk with Spear, Hunt gets from him a full disclosure of the discovery, and a statement that it belonged to Dr. Jackson. According to this, Dr. Morton got the requisite information and instructions from Dr. Jackson; came home; *tried it on a woman, and it worked first-rate*; and he had since then continued to use it under the directions of Dr. Jackson. The evidence shows that Spear well knew that the *experiment* was not tried on a woman, but on a man, whose certificate was read next day by hundreds in the city of Boston. But the witness evidently took this part of the story from the narrative of Don P. Wilson (whose deposition was taken on the same day) about the refractory female patient named in the conversation with Dr. Jackson on the 30th of September, who was to be cheated with atmospheric air, administered from a gas bag.

"From among the thousands with whom Dr. Morton communicated, touching this discovery, during the winter of 1846 and 1847, some six or seven, with whom he had personal controversies, testify to his admissions that he was not the discoverer. They differ as to the degrees of directness and fullness with which he opened the matter to them, but it will be found, as your committee believe, to be a rule in this case, having no exception, that the more violent the hostility of the individual, the more fiercely he assailed Dr. Morton's patent, the more free Morton became in his communication, and the more fully did he unbosom him-

self; and his statements always went directly to defeat his own claims, and support the defence of the opponent to whom he made it. For example, H. S. Payne says 'that, in the early part of December, 1846, he commenced applying the vapor of ether to produce insensibility to pain in surgical operations. This was after I had heard of the discovery of the preparation by Charles T. Jackson, of the city of Boston.' He then states that Dr. Clarke purchased of Dr. Morton a right, under the patent, for Rensselaer and several adjoining counties, who sold to Dr. Bordell and Dr. Payne, was notified by Dr. Blake, as the agent of Dr. Morton, to abandon the use of ether in his practice. After failing in an attempt at negotiation with Dr. Bordell, he went to Boston and had an interview with Dr. Morton, who not once only, but repeatedly, declared that Dr. Jackson was the *sole discoverer*; 'that all the knowledge he possessed in relation to its properties and application came from Dr. Jackson, and that he never had any idea of applying sulphuric ether, or that sulphuric ether could be applied for the aforesaid purposes, until Dr. Jackson had suggested it to him, and had given him full instructions.' This most frank communication raises at once a difficulty about the patent, which is obviously void if that statement be true; and Dr. Morton attempts to remove it by saying 'that he had been very fortunate in affecting an arrangement with Dr. Jackson before any one else had the opportunity, and that he was the first man to whom Dr. Jackson communicated the discovery.' And he adds: 'Dr. Morton *again and again* said that he was not in any way the *discoverer of the new application of ether, but that the idea had been first communicated to him by Dr. Jackson, who was its discoverer, and that his (Dr. Morton's) interest in the patent was merely a purchased one; and, moreover, that he was very lucky in anticipating all other persons by first receiving so precious a discovery from the lips of Dr. Jackson.*'

"After seeing the fullness and unreserved character of this important conversation, and the apparent earnestness with which Dr. Morton attempts to impress the fact that he had no participation whatever in the discovery, not satisfied with suffering it to escape him inadvertently or even stating it once, but repeating it 'again' and 'again,' as if he were anxious to impress it, one could not but be surprised to know that Dr. Payne, before this conversation, had *pirated* this discovery; had set up for himself; bade defiance to Dr. Morton and his assignees; and on his return home, published a card, in which he by no means denies that Dr. Morton discovered the *thing* which he and his assignees are using, but averring that his (Dr. Payne's) *anodyne vapor*, which in his affidavit he admits to be sulphuric ether, 'is not the invention of the great Dr. Morton, but an entirely superior article, and all persons must beware how they infringe on his rights.' And the more especially is it surprising when we reflect that this state of facts, which Dr. Morton took such unusual pains to repeat and to impress upon this his most determined opponent, would, if true, render the patent wholly void in his hands, and put his discovery entirely in the power of Dr. Payne, and all others who should see fit to avail themselves of it. There can be no absolute proof that Dr. Morton did not make these statements; but it is clear that it was against his interest to make them; and there is also full proof that they are not true, and that they are in direct opposition to his numerous printed and published statements. They are not true; for, be-

sides the six witnesses who testify directly or indirectly to the discovery in its inception and progress, it distinctly conflicts with the conversation of the parties, and their mutual understanding, on the 26th and 27th of October, as testified to by R. H. Eddy. It is in direct conflict with the claim promulgated by Dr. Morton, and received and accredited by the scientific gentlemen in the medical hospital, who performed the operations testing the efficacy of the discovery.

“Dr. Warren says:

“BOSTON, *January 6, 1847.*

“I hereby declare and certify, to the best of my knowledge and recollection, that I never heard of the use of sulphuric ether by inhalation, as a means of preventing the pains in surgical operations, until it was suggested by *Dr. W. T. G. Morton*, in the latter part of October, 1846.’

“And alike opposed to all the numerous printed circulars which Dr. Morton and his agents had distributed and were then distributing in every part of the United States. It appears that prior to this date, Dr. Morton’s attention had been called to an opposing claim to the discovery, and to the experiments at the hospital, and he had taken a decided public stand against them, as witness his circular, published the 20th day of November, 1846, and the note thereto attached:

“‘DENTAL OPERATIONS WITHOUT PAIN.

“*Dr. Morton has made a great improvement in dental and surgical operations*, for which letters patent have been granted by the Government of the United States, and to secure which measures have been taken in foreign nations.

“Having completed the necessary preparations for the purpose, and greatly enlarged his establishment, Dr. Morton respectfully announces to his friends and the public that he is now ready to afford every accommodation to persons requiring dental operations.

“His assistants and apartments are so numerous, and his entire arrangements on so superior a scale, that immediate and the best attention can be given to every case, and in every branch of his profession.

“The success of this improvement has exceeded the most sanguine expectations, not only of himself and patients, but of the very skilful and distinguished surgeons who have performed operations with it at the Massachusetts General Hospital, and other places in Boston, or witnessed its use at his office. Rooms, No. 19, Tremont Row.

“Boston, *November 20, 1846.*

“* * * Inasmuch as one or two persons have presumed to advertise my improvement *as their own*, and even issued notices to the effect that the applications of it at the hospital were made *by them*, and that the certificates of its efficacy and value were given *to them* by the SURGEONS OF THAT INSTITUTION, I feel it my duty to warn the public against such false and unwarrantable statements; and at the same time to caution all persons against making, aiding, or abetting in any infringement of my rights, if they would avoid the trouble and cost of prosecutions and damages at law.’

“And your committee do not think it credible that Dr. Morton, resting his claims to the discovery on the grounds which he did—having a most decided public opinion at home in his favor as the discoverer—having freshly tasted of the intoxicating draught of fame—and recently, in the public papers and in circulars, asserted his authorship of the discovery

and defied his rivals—they do not think it credible that he should seize the first occasion which offered, in conversation with a most determined, opponent, to declare the falsehood of all that he had written, published and claimed—to disclaim the honor which the world so generally and freely accorded him—confess away all his pecuniary rights under the patent—and even support his surrender, disclaimer, and sacrifice by a self-debasing assertion which he well knew was false. The improbability is too strong to allow it credit.

“But Dr. Payne says, that in the early part of December, 1846, he commenced his operations with sulphuric ether, and that this was after he had heard of the discovery of Dr. Charles T. Jackson, of Boston. How he heard of the discovery of Dr. Jackson he does not say; surely not by the information of the scientific men of Boston, for they attributed the discovery to Dr. Morton; not by the public prints, cards, and advertisement, for the name of Dr. Morton alone appeared there; and he says, in conclusion, that *he was very much astonished* in learning, some time after his visit to Boston, that Dr. Morton ‘asserted any claim whatever’ to the discovery, and this, after the publication and circulation of the notices, cards, and circulars of Dr. Morton, and after the witness had long been engaged in an embittered contest with Morton and his assignees, and the publication of his (Dr. Payne’s) card.*

“Dr. Allen Clarke, who also testifies to admissions by Dr. Morton, but much less strongly than Dr. Payne, and whose statement may well be the result of a misunderstanding, made the more decided by hostility to Dr. Morton, and a desire to defeat his patent, was the purchaser of a right, for which he gave his note for \$350. He at length determined not to pay the note, but to join in contesting the patent, and he expresses the opinion, that by keeping up the controversy for one year, the patent would be broken down. Dr. Blaisdell says ‘Clark would not pay you, for he could get the use of the letheon for one year, before you could get the license from them, and by that time they could ruin the sale of it there,’ and he might well have added, and with it the discoverer; a very common fortune to men who render the most important services to their race.

“Time, and the reasonable limits of a report, will not allow your committee to dwell upon the few remaining items of kindred testimony. The weight and strength of them have been considered; and the residuc, like them, are composed of alleged statements by Dr. Morton to persons with whom he then had, or has since had, personal controversies touching his discovery, and they are all in contradiction to the claims which Dr. Morton daily promulgated in print to the world. Those printed papers are, as your committee conceive, the best evidence of what Dr. Morton all that time claimed, and what he conceded;

* “NOTICE.—Dr. Payne has just returned from Boston, and has only time now to give notice to his friends and the public, that in a day or two he will be able to show to the public that the anodyne vapor which he has used is not the invention of the great Dr. Morton, but an entirely superior article, and *that he shall continue to use it*. And all persons must beware how they infringe on his rights.” Extract of a letter of Mr. E. Filley, attorney of Dr. A. Clarke, of Lansingburg, New York, to Dr. Morton’s attorney of Boston.—“As one Dr. H. J. Payne, dentist, of the city of Troy, persists in the use of the apparatus and gas, and proclaims defiance to Dr. Morton and any of his assigns, Dr. Clarke is completely thwarted in his enjoyment of the rights secured to him by Dr. Morton. The conduct of Dr. Payne is particularly annoying.”

they are of the time and of the transaction ; they do not admit of misstatement, misconstruction, or falsification ; they are of unvarying and exact memory ; and they speak the language of undoubted truth as to the claims, though not as to the rights of the author. His claims, contemporaneous with these papers, are what these witnesses attack. His *rights* we have already considered ; and, as to the evidence of his *claims*, that which he insisted and said was his, the published papers stand against the testimony of these witnesses, as written or printed evidence against parol. His alleged confessions, made under the most improbable circumstances, are in direct contradiction to his printed circulars, daily and contemporaneously promulgated to the world. If, then, these alleged parol admissions stood against the printed and published papers, without anything beside to add strength to either, we could not, in our conscience, in weighing the conduct of men by rational probabilities, hesitate to give the decided preponderance to the printed over the parol evidence. But the parol evidence runs counter to all the leading facts in the case heretofore considered and established, in the opinion of your committee, by the most indubitable proof, while the printed circulars and notices entirely agree with them, and make with them one uniform and consistent whole. The objects of the parties, their claims, their efforts, their purposes, appear the same throughout. The deposition of A. Blaisdell is, however, worthy of especial comment. At the time he professes to have had the conversation in which Dr. Morton accords all the merit of the discovery to Dr. Jackson, he was the agent of Dr. Morton, spreading his circulars throughout the land ; had taken care to send one of them to each and every surgeon dentist in New York ; and yet now declares that he was especially charged with the information which he takes care to inculcate, that these circulars were all false in the most material point, and that the patent which he is selling is void by reason of that falsehood.* He was at the same time in habits of almost daily correspondence with Dr. Morton ; and the difficulties which he met with occurred while he was absent, and it would most naturally have suggested itself to him to communicate them to Dr. Morton by letter, and in that way get his assent to obviate them by declaring Dr. Jackson the *sole discoverer*. But he does not do so ; if he had, his letter and Dr. Morton's answer would have been in writing ; and, then, if there were truth in the statement of those alleged admissions, there would have been one item of written evidence to support them. But this is wholly wanting. Blaisdell professes to have waited till his return to Boston, and then to have held a private conversation with Dr. Morton, who at once and eagerly admitted away his *whole claim*, both to money and reputation.

"It is remarkable that, in more than three months, during all which time these witnesses say Dr. Morton conceded to Dr. Jackson the merit

* Extract from A. Blaisdell's letter to Dr. Morton, dated New York, December 29, 1846.—

"I am sending one of your circulars to every dentist in New York."

New York, December 31, 1846.—"I have sent a circular to every dentist in New York city, and written on the cover where I am to be found."

In a letter from Pittsburg, dated February 1, 1847, he writes : "I gave him a few circulars to give his neighbors." Remarks to the same effect occur in other letters.

October 26, 1846.—"Dr. Morton has discovered a compound, by inhaling which, a person is thrown into a sound sleep, and rendered insensible to pain," &c.

of being the 'sole discoverer,' and during all which time he was daily writing and almost daily publishing, there is not produced one line written by Dr. Morton, or written to him, countenancing the idea; nor is there one act of his which looks to such admission. A written admission, or an ambiguous paragraph in writing, which could be fairly construed into an admission, or a letter written to him during that time, which could be reasonably construed to refer to such admission, would be tenfold the value of all the parol testimony now presented, of those admissions. Dr. Morton has shown to the committee several bound volumes of letters addressed to him upon this subject, all of which recognise him as the discoverer. Viewing these statements in this point of light, comparing them with the printed and published papers,* in which Dr. Morton contemporaneously and continually asserted his claims to the discovery, and finding them opposed, as they are, to the well-settled facts of the case already considered, they weigh, in our opinion, as dust in the balance, and in no wise affect the well-settled facts of the case."†

It may not be irrelevant to remark that there is not, in all this mass of depositions and letters, any contemporaneous written paper supporting Dr. Jackson's claim to the discovery, or impugning Dr. Morton's—all is parol. Declarations made by Dr. Jackson asserting the claim, and declarations made by Dr. Morton, even in the heat of the controversy, to his most violent enemies, abandoning his claims and surrendering them to Dr. Jackson. But no written paper sustaining either. And where in two instances the statement of Dr. Jackson touches a paper written or signed by himself, he repudiates them as false, and as obtained by circumvention and fraud; because, if true, they disprove his claim. And in the instances in which the testimony of his witnesses, tending the admissions and abandonment of Dr. Morton, can be directly tested by written papers, they are thereby in every instance proved to be false. Your committee consider that species of parol evidence, made up of alleged declarations of the parties merely, unsupported by a single written paper, but contradicted by every thing in writing which they touch, entitled to no weight whatever, against the well known and fully admitted acts of the parties in this case.

* "*To the public.*—Dr. Morton, surgeon dentist, No. 19, Tremont Row, Boston, hereby gives public notice that letters patent have been granted him by the Government of the United States for his improvement, whereby pain may be prevented in dental and surgical operations."—*Boston Evening Transcript*, November 20, 1846.

† "*Important information for the public at large.*—I do hereby give this public notice, and warn all persons against using my invention." "I am particularly desirous that my invention should not be abused or intrusted to ignorant or improper hands, or applied to nefarious purposes." "*New York Express*, *Baltimore Patriot*, *United States (Philadelphia) Gazette*, will please insert the above twice every week for four weeks, and send their bills to this office." *In same paper* December 4, 1846.

† In answer to a communication by Dr. J. F. Flagg, in which he threatens to take possession of the invention, and in which he attributes the credit of it, if there was any, to Dr. C. T. Jackson, Dr. Morton says: "Unless he can show—and I do not know any body else that can—that (to use his own words) it has been known and published for some years that the vapor of sulphuric ether would produce the visible effects now said to be discovered, then the invention is original."—*Boston Evening Transcript*, December 10, 1846.

In a letter from Dr. Wells (*Boston Post*, April, 1847,) he makes the following extract from Dr. Morton's letter to him in the early part of October, 1846: "The letter which is thus introduced with my signature, was written in answer to one which I received from Dr. Morton, who represented to me that he had discovered a compound."

Of Dr. Jackson's acts, while the surgeons of the principal curative institution in New England—the Massachusetts General Hospital—were applying the critical test to a discovery which he now claims as his own, the committee have before them new evidence in the following letter; upon which they forbear to comment further than to remark how decidedly it confirms the conclusions at which they have already arrived:

Dr. Henry J. Bigelow, Professor in Harvard University, and Surgeon in the Massachusetts General Hospital, in answer to a letter of the Hon. Geo. T. Davis, says:

Boston, *February 5, 1852.*

DEAR SIR: I beg to acknowledge the receipt of your letter, dated January 21, addressed to Dr. Hayward, Dr. Townsend, and myself, and containing the following extract from a written remonstrance of Dr. Charles T. Jackson, which has been laid before a committee of the House of Representatives.

"The cause of asphyxia, so commonly produced in the early administration of ether at the Massachusetts General Hospital, I traced directly to the employment of those valved inhalers. In the weakened state of respiratory action, under anæsthetic agents, the valves are not raised in attempts to breathe, and the patient is drowned by the pure ether or chloroform vapor. On the removal of the valve by my directions, asphyxia at once ceased to occur at the Hospital, and I had no occasion to employ the oxygen gas to revive the patients, as I was requested to do by one of the eminent surgeons of that institution; for no asphyxia happened after my advice was followed, to throw aside the inhalers and use a sponge."

In detailing as you request "a precise recollection of facts upon these points so far as they fell under my personal observation," I may say that, to the best of my knowledge, being very familiar with those early experiments at the hospital, generally administering the ether myself.

1st. There was no more asphyxia then, from ether, than there is now.

2d. There was certainly no period at which asphyxia at once ceased to occur at the hospital.

3d. This alleged asphyxia had little or no connexion with any valves.

4th. I never heard that any valves were suppressed, nor that Dr. Jackson suppressed them.

5th. Asphyxia as it then occurred was of no great importance, and was dependent upon the same causes which sometimes produce it now.

6th. When Dr. Jackson brought oxygen gas to the hospital, nobody required it; it was not used, nor has it been, to my knowledge, anywhere since used, in this connexion.

In reply to your inquiry how far Dr. Jackson personally superintended the early administration of ether at the Hospital, I answer, *not at all*. He not only exercised no superintendence at the Hospital, assumed no responsibility, but actually did not come there for more than two months after ether was regularly in use in that institution.*

*See Dr. Townsend's letter, page 34.

I will venture to allude to another point, which is of no importance to anybody but myself. Yet it directly concerns me, and I should be glad of an opportunity to refer to it, in order to refute certain statements of Dr. Jackson. In a part of his "remonstrance," Dr. Jackson uses, as I am informed, the following words:

"The few medical gentlemen, or young surgeons, connected with the Hospital, who have not fully recognized my rights in this discovery, are, I lament to say it, anxious to obtain a larger share of the glory than rightfully belongs to them; and one of them* * * *

"Dr. H. J. Bigelow very distinctly claims the honor of being the first to promulgate this great discovery, the first to make the profession acquainted with it, he having stealthily published my discovery before I was ready to lay it before the public, and while I was temporarily absent from the city, by reading an account of it before two societies of which I was, and am now, a member—the Boston Society for Medical Improvement and the American Academy of Arts and Sciences—and afterwards published his paper in the Boston Medical and Surgical Journal, against my solemn protest and denunciation of it as false, unjust, and quackish. In that paper, a copy of the journal containing which I send to you, please observe that the nature of the agent used is carefully concealed, and hence it is a mere quack advertisement."

The paper above alluded to was the first paper upon the newly discovered effects of ether. It was intended by Dr. Morton, and did happen to be the instrument by which the discovery was announced to the profession and the world at large, both in this country, where it was attacked by the incredulous, and in Europe, where it was widely reprinted.

This paper,† to quote a contemporary publication, was intended to be a narration of physiological facts observed by myself, with a few concluding remarks connected with the patent right. It was published more than five years ago, and those objections of Dr. Jackson's are now to me altogether new, and I believe they are also new to every body else.

It will only be necessary to state in reply: 1st. That Dr. Jackson could not at that time, for the want of the requisite facts, have himself written this physiological paper. In fact that nothing but his present assertion shows that he had either the intention or desire to do it, and that there was no reason whatever either to consult him either in reading or writing the paper, or to suppose that he wished to be consulted.

2d. That he read the paper before it was printed, and assented to its publication in print.

1. One thing is very striking, Dr. Jackson never saw a single surgical or dental operation with ether until long after it was a confirmed discovery, and until weeks, if not months, after this paper was printed. As this paper was an account of the new physiological effects of ether, observed in Dr. Morton's and other experiments, Dr. Jackson, who saw none of these experiments, would have been unable to have made any communication to a society upon this point, even if he had wished to, for the simple reason that for two months he had not the requisite materials, but no body will now believe that he wished to make any such

* A part of the argument is here a little loose and is omitted.

† Boston Medical and Surgical Journal, December, 1846.

communication ; he had, according to his own statement, kept the matter from the public for years, and we may reasonably infer that he would have done so till this day, if the disclosure had been left to him. And it is well known that he kept aloof for a long time from any public connexion with Dr. Morton or with ether, while physiological papers were written by the dozen by other people, without any objection on his part.

I should have been certainly most happy to have consulted Dr. Jackson, had I any idea that, as he now pretends, he desired it ; but even if I had done so, it is plain that he could have given me no information upon the subject which was under investigation, for he had no control whatever over Dr. Morton's experiments—he had never seen them, nor had he any authority to make use of them, if he had seen them. The paper alluded to was not designed to promulgate old theory nor the suspicions of two years standing, which Dr. Jackson claims, but new facts, and for these I applied to Dr. Morton. *He instituted the experiments ; he had their sole control ; he took the responsibility of them, while Dr. Jackson kept out of the way.*

The application of ether for anæsthetic purposes, was at that time supposed by everybody to be wholly in the hands of Dr. Morton. Dr. Morton, through the intervention of a friend of his, who was also a friend of my own, allowed me to take notes of these experiments for publication, and as far as I know, I was the first person not connected with Dr. Morton's office, except Dr. Gould, who saw these experiments.

As to Dr. Jackson's knowledge of the cases at the hospital, which are also detailed in my paper, Dr. Jackson did not come there till January 2d, of the year after they occurred.

2. When this paper was to be printed, a new element was to be introduced into it, at the request of Dr. Morton ; the question of patent, a delicate subject already mooted by the interested parties, and about which it was obviously proper that Dr. Jackson, who was interested in it, should be consulted. Though he might not care who prosecuted or announced the physiological experiments, the matter of patent was plainly a different question.

I therefore sought an interview with Dr. Jackson at his house several times. Failing to find him, I left for him a verbal request that he would be present at a final conference at the house of Dr. Gould, where the paper was to be finally considered and adjusted before being printed ; especially the few closing paragraphs, then for the first time appended to it, and relating to the question of patent.

During this conference, the door was flung open, and Dr. Jackson entered, declaiming vociferously. He was quietly asked what might be the occasion of his excitement ; and was requested to read the paper then upon the table, and under discussion, and to see whether he did or did not approve it. Dr. Jackson examined the paper, and finding it to be of a strictly physiological character, touching very lightly the questions of patent and of discovery, he changed his tone, ceased to object, requested one or more alterations of the part bearing upon these latter questions, especially the suppression of a paper relating to the electric telegraph, *and assented to the publication of the paper.*

This took place at the house of Dr. Gould, in Tremont street, on Sunday evening, three days before the publication referred to, and in the presence of Dr. Gould, Mr. Eddy, and Dr. Morton. Dr. Jackson assent-

ed to the publication of the paper as it then stood, and the conference was amicably terminated.

This statement, together with the accompanying letters of Dr. Gould, and Mr. Eddy, stating their recollection of the facts, may be compared with the above extract from Dr. Jackson's remonstrance.

I have the honor to be, very respectfully, your obedient servant,
HENRY J. BIGELOW.

Dr. Gould's letter referred to in the above :

BOSTON, *July 14, 1852.*

DR. H. J. BIGELOW :

DEAR SIR: In answer to your inquiry respecting my recollection of a certain interview at my house between yourself and Dr. C. T. Jackson, and of the impression I received at the time, I would reply that I distinctly recollect the interview alluded to. The article you were about to publish was submitted to Dr. Jackson, and the latter part, at least, where alone any objectionable expressions were supposed to lie, was read by him, after which I received no other impressions than that he found nothing to object to. One passage was excluded, which it was thought might have some bearing on the question of discovery, and I think at his suggestion.

Yours truly,

AUGUSTUS A. GOULD.

Mr. Eddy's letter referred to in Dr. Bigelow's letter :

BOSTON, *July 12, 1852.*

DR. H. J. BIGELOW :

DEAR SIR: In reply to your request to me to state what I recollect in relation to a conference you had with Dr. C. T. Jackson one Sunday evening at the house of Dr. A. A. Gould, and on the subject of a paper you was preparing for publication in the Boston Medical Journal, which paper was subsequently, within a few days after, published, and treated of the recent discovery of the application of ether to annul pain in surgical operations, I would remark that I was present at such interview, that the article you had proposed was exhibited to Dr. Jackson, who carefully examined it, and after suggesting, or their having been suggested, some trifling changes in it, he expressed his entire satisfaction with it, and willingness that it should be published. I afterwards read the article as it appeared in the Medical Journal, and so far as my recollection serves me, I perceived nothing in it differing from what it was decided to be satisfactory to Dr. Jackson on the said evening.

Yours respectfully,

R. H. EDDY.

Dr. Jackson, in his letter to Baron Von Humbolt, says :

"I at once appealed to the public, destroyed the bond given me by Mr. Morton, and made the use of ether in surgical operations free to all mankind."

The transaction of *destroying the bond* is somewhat ludicrous.

On the morning of the 26th May, 1847, more than five months after the patent had been taken out, after it had for some time become unavailable, and Dr. Morton had lost a good deal of money by it, Dr. Gay called at Dr. Morton's office, with a young gentleman in his company, and somewhat dramatically cancelled the bond. This was the bond that

secured to Dr. Jackson ten per cent. on the net profits of the American patent. On the same day, the anniversary of the Massachusetts Medical Society took place, and at the dinner in the afternoon, Dr. Jackson made a speech, in which he claimed to have been entirely disinterested in his connection with the discovery, and said he had destroyed the bond. He did not say that he had destroyed it that morning, just in season for the speech; but we are permitted to infer, that it was destroyed at a time when it had some value.

The inconsistency between these late claims for disinterestedness on the part of Dr. Jackson, and his unremitted efforts to obtain the utmost possible pecuniary advantage from the discovery, so long as there was any chance of its being profitable, is apparent to all.

So long as the discovery was under test, and its result was uncertain, Dr. Jackson is unseen and unheard. When it became evident, from the two experiments at the hospital, that the discovery was of value, at the close of October, Dr. Jackson first appears, and then only for the purpose of claiming compensation of Dr. Morton for professional advice. He accepts five hundred dollars. His friend obtains for him ten per cent. of the net profits of the American patent. He next refuses to sign the European papers without receiving ten per cent. on the foreign patents. From this he rises to twenty per cent., and on the 28th of January he claims "twenty-five per cent., both at home and abroad, as the least that in justice" can be offered him; and his counsel, of course with his sanction, speaks of the patent as one which "if sustained, promises to give to all parties large sums of money for their united co-operation." He opens negotiations with Dr. Morton, through Mr. Hays, for obtaining a joint patent in France, by the instrumentality of M. De Beaumont, whose letters to Dr. Jackson on this point were shown to Dr. Morton. After all hope of pecuniary benefit from the patent is at an end, he cancels the bond, and, with a strange forgetfulness of all his previous conduct, comes out in the character of one who disdains pecuniary compensation. Not only so, but he seems determined that Dr. Morton shall receive no compensation. On the 20th November, 1847, the physicians and surgeons of the hospital (with one exception) prepared a memorial to Congress, setting forth the importance of this discovery, and praying the government to make a payment "to those persons who shall be found, on investigation, to merit compensation," on condition that the patent be given up. Knowing that this would result in an official inquiry into the discovery, Dr. Morton promoted it to the utmost of his power. Dr. Jackson on the other hand, remonstrated against it, on the professed ground that he would submit his claims to no tribunal, and that, as the sole discoverer, he wished no reward beyond the gratitude of mankind.

It is well known that an effort was made in London, by subscription, for a donation to the discoverer of the effects of ether. By letters to gentlemen in this country from friends in London, we are informed that a sum, estimated at £10,000, was considered as secured. But the controversy and doubt created by Dr. Jackson's communications to the French Academy caused it to be abandoned.

Dr. Jackson speaks of Dr. Morton in terms of great bitterness. He assails his private character, declaring that it is infamous, and that in knowledge and intellect he is an ignoramus and an imbecile, not only not possessed of science, but mentally incapable of acquiring it; and

that, while administering his anæsthetic vapor to the patients at the hospital, he was offensive to the faculty by reason of ignorance and quackery. Much of his letter to Baron Von Humboldt, which he has filed before your committee as his answer, for this reason, would not be suffered to remain on the files of a court of chancery, but would be stricken out for scandal and impertinence. Your committee utterly refused, as stated above, to receive evidence of general character, or of particular accusation or defence for or against either of the parties, not relevant to the issue. But as the charges advanced by Dr. Jackson against Dr. Morton in the letter above, must remain on the files of the House, and be printed with the proceedings of the committee, they deem it but just to say that these charges are not only not supported by, but are utterly inconsistent with, the current proofs in this case. And they think it proper to refer to the letters herewith published of Drs. Warren, Hayward, Bigelow, and Townsend, Surgeons of the Massachusetts General Hospital, for conclusive evidence of his capability to conduct the experiments; to the following testimonial by the Trustees of that Institution for the estimation in which they and the public generally held his services; to the certificates and diploma for medical qualifications on pages 19, 20, and to the letters from two of the Ex-Governors of his State and the Mayor of the city in which he resides, for the estimation in which he is held at home :

“BOSTON, *May* 12, 1848.

“DEAR SIR: At a meeting of the Board of Trustees of the Massachusetts General Hospital, a few weeks since, it was informally suggested, that a limited subscription of one thousand dollars shall be raised for your benefit, in acknowledgment of your services in the late ether-discovery; no one to be asked to subscribe more than ten dollars. We consented to act as a Committee to receive and apply the proceeds of this subscription. The proposed sum having been obtained, we have now the pleasure of transmitting it to you. We also enclose the subscription book in a casket which accompanies this note. Among its signatures you will find the names of not a few of those most distinguished among us for worth and intelligence; and it may be remarked, that it is signed by every member of the Board of Trustees.

“You will, we are sure, highly value this *first* testimonial, slight as it is, of the gratitude of your fellow-citizens. That you may hereafter receive an adequate national reward is the sincere wish of your obedient servants,

“SAMUEL FROTHINGHAM,
“THOS. B. CURTIS.

“TO DR. WILLIAM T. G. MORTON.”

The box accompanying this note had upon it the following inscription: In front, “Testimonial in honor of the Ether Discovery of Sept. 30, 1846.” And on the lid, “This box, containing one thousand dollars, is presented to William Thomas Green Morton by the members of the Board of Trustees of the Massachusetts General Hospital, and other citizens of Boston, May 8, 1848.”

Letter from Governor Briggs.

“COUNCIL CHAMBER, BOSTON, *Jan.* 12, 1849.

“DEAR CORWIN: Allow me to introduce to your acquaintance Dr. Morton, of this city, whose name the world knows as the discoverer of

the application of ether to alleviate pain. An application to Congress for some compensation for the discovery is to be made. May I ask you, for the doctor, who thus far, though he has relieved thousands of others from suffering, has had nothing but suffering himself as his reward, to look at his case, and if you find it has merits, give it your support.

"Sincerely and truly yours,

"GEO. M. BRIGGS.

"HON. THOS. CORWIN."

Letter from Governor Morton.

"BOSTON, January 12, 1849.

"DEAR SIR: I am happy to have the opportunity of presenting to your acquaintance Dr. W. T. G. Morton, of this city. Dr. M., who by reputation is doubtless known to you, has the distinction to have his name identified with one of the most important discoveries of modern times—the application of ether as an agent for producing insensibility to pain in surgical operations. His object, as I understand, in visiting Washington at this time is to endeavor to procure from Congress some recognition of the value of his discovery. I beg leave to recommend him to your kind attention.

"I am, very respectfully, your friend and servant,

"To HON. THOS. H. BENTON.

MARCUS MORTON."

Letter from Mayor Bigelow.

"BOSTON, December 9, 1848.

"SIR: I avail myself of the honor which I had of making your acquaintance last season, during your visit to Boston, to introduce to you my friend, Dr. Morton, the discoverer of the effect of ether in producing insensibility to pain, a discovery which has placed him in the front rank of the benefactors of the human race. He visits Washington in the hope of obtaining some recognition on the part of Congress of the value of his discovery, and has already secured the favorable consideration of some of the members. Your assistance in the matter would be in keeping with your well known and enlightened philanthropy, and would be gratefully appreciated.

"I have the honor to be, very respectfully, your obedient servant,

"JOHN P. BIGELOW.

"HON. ISAAC E. HOLMES."

The claim in behalf of Dr. Wells rests on his experiments with nitrous oxide, referred to by your committee in the early part of their report. He had the merit of attempting to carry out practically the idea suggested by Sir Humphrey Davy, of rendering by its influence a patient insensible to pain in a surgical operation. He has also undoubtedly the merit of having contributed something in directing the mind of Dr. Morton to the subject, and thus aided in conferring this great boon upon mankind. Originally he did not claim for himself the honor of the discovery, but merely of the attempt, which he admitted to have been fruitless.

The letter of Dr. Morton announcing his discovery and the reply of Dr. Wells, together with the letter of R. H. Eddy, dated February 17, 1847, prove this. They are as follows:

"BOSTON, *October 19, 1846.*

"FRIEND WELLS—*Dear Sir*: I write to inform you that I have discovered a preparation, by inhaling which, a person is thrown into sound sleep. The time required to produce sleep is only a few moments, and the time in which persons remain asleep can be regulated at pleasure. While in this state the severest surgical or dental operations may be performed, the patient not experiencing the slightest pain. I have perfected it, and am now about sending out agents to dispose of the right to use it. I will dispose of a right to an individual to use it in his own practice alone, or for a town, county, or State. My object in writing you is to know if you would not like to visit New York and the other cities, and dispose of rights upon shares. I have used the compound in more than one hundred and sixty cases in extracting teeth, and I have been invited to administer to patients in the Massachusetts General Hospital, and have succeeded in every case.

"The Professors, Warren and Hayward, have given me written certificates to this effect. I have administered it at the Hospital in the presence of the students and physicians—the room for operations being as full as possible. For further particulars I will refer you to extracts from the daily journals of this city, which I forward to you.

"Respectfully yours,

WM. T. G. MORTON."

"HARTFORD, CONNECTICUT, *October 20, 1846.*

"DR. MORTON—*Dear Sir*: Your letter dated yesterday, is just received, and I hasten to answer it, for fear you will adopt a method in disposing of your rights, which will defeat your object. Before you make any arrangements whatever, I wish to see you. I think I will be in Boston the first of next week—probably Monday night. If the operation of administering the gas is not attended with too much trouble, and will produce the effect you state, it will, undoubtedly, be a fortune to you, provided it is rightly managed.

"Yours, in haste,

H. WELLS."

"BOSTON, *February 17th, 1847.*

"R. H. DANA, Esq.—*Dear Sir*: In reply to your note of this morning, I have to state that about the time I was engaged in preparing the papers for the procuring of the patent, in the United States, on the discovery of Dr. Morton, for preventing pain in surgical operations, by the inhalation of the vapor of sulphuric ether, I was requested by Dr. Morton to call at his office to have an interview with the late Dr. Horace Wells, who was then on a visit to this city, and who, Dr. Morton thought, might be able to render him valuable advice and assistance in regard to the mode of disposing of privileges to use the discovery. Accordingly I had an interview with Dr. Wells. During such meeting we conversed freely on the discovery and in relation to the experiments Dr. Wells had been witness to in the office of Dr. Morton. The details of our conversation I do not recollect sufficiently to attempt to relate them, but the whole of it, and the manner of Dr. Wells at the time, led me, in no respect, to any suspicion that he (Dr. Wells) had ever before been aware of the then discovered effect of ether in annulling pain during a surgical operation. Dr. Wells doubted the ability of Dr. Morton to procure a patent, not on the ground that he (Dr. Morton) was not the first and original discoverer, but that he (Dr. Wells) believed the discovery was not a legal sub-

ject for a patent. He advised him, however, to make application for one, and to dispose of as many licenses as he could while such application might be pending; in fact, to make as much money out of the discovery as he could while the excitement in regard to it might last. I must confess that when, some time afterwards, I heard of the pretensions of Dr. Wells to be considered the discoverer of the aforementioned effect of ether, I was struck with great surprise, for his whole conversation with me at the time of our interview, led me to the belief that he fully and entirely recognized the discovery to have been made by Dr. Morton, or at least partly by him and partly by Dr. C. T. Jackson, as I then supposed.

“Respectfully yours,
“R. H. EDDY.”

The evidence presented with Dr. Wells' claim shows that dental operations were in several instances performed without pain by Dr. Wells under the influence of nitrous oxide, which had been before known in some cases to produce a total or partial asphyxia. It appears also that the vapor of sulphuric ether was thought of, discussed, and finally rejected by him—while the total abandonment of the use of nitrous oxide, and indeed of every other agent, shows that Dr. Wells' experiments were, on the whole, unsuccessful. He engaged in the search and failed to find the object of his pursuit. He attempted and endeavored assiduously to carry out the idea to practical results, but was not successful. There was great merit in the effort, but it proved a failure.

Dr. Wells, therefore, in the opinion of your committee, is not entitled to the honor of the discovery. He stopped half way in the pursuit. He had the great idea of producing insensibility to pain, but he did not verify it by successful experiments. He mistook the means, and he unfortunately rejected the true anæsthetic agent as dangerous to life, and therefore did not make the discovery and give it to mankind. He did what Dr. Beddoes, Sir Humphrey Davy, and Dr. Townsend had done about the close of the last century, but nothing more.

But he had the signal merit of reviving the investigation, and, probably, of hastening the discovery. If an idea connected with the subject lay dormant in the mind of any one, his attempt was well calculated to awaken it into life. When in the fall of 1844 he made his public attempt, in Boston, to produce anæsthesia during a dental operation, by the use of nitrous oxide, if Dr. Jackson had indeed made and perfected this discovery, and felt an abiding confidence in its truth, who can doubt that he would have availed himself of that occasion, or have been reminded by it, to make for himself another, at an early day, of publicly exhibiting and testing the true anæsthetic agent?

The question of discovery, which your committee has thus endeavored to examine, was every way proper to be tried and settled by intelligent men, as a jury of the vicinage, which was proposed by Dr. Morton and refused by Dr. Jackson. (See Appendix.) But it was finally tried by a most appropriate tribunal—the Trustees of the Massachusetts General Hospital, at which the first public exhibition of this pain-destroying power was made, and where its effects were first witnessed by an admiring audience. The question of discovery was tried before these men—trustees of a scientific corporation, to whom Dr. Jackson was well known as a

distinguished member of the medical faculty, and to whom Dr. Morton, prior to the discovery, and the contest to which it led, was known only as a young man of energy and enterprize. And this Board, composed of men whose names would do honor to any scientific institution, presently after the discovery, near the time and at the place where it occurred, gave by a unanimous voice its honor to Dr. Morton. One year after they reviewed their decision, at the request of Dr. Jackson, and unanimously confirmed it. In this connection your committee deem it proper to introduce a letter from the honorable Secretary of State:

“WASHINGTON, December 20, 1851.

“Dr. W. T. G. MORTON—*Dear Sir*: In reply to your letter of the 17th inst., I would say that, having been called on, on a previous occasion, to examine the question of the discovery of the application of ether in surgical operations, I then formed the opinion which I have since seen no reason to change, that the merit of that great discovery belonged to you, and I had supposed that the reports of the Trustees of the Hospital and of the Committee of the House of Representatives of the United States, were conclusive on this point.

“The gentlemen connected with the hospital are well known to me as of the highest character, and they possessed at the time of the investigation, every facility for ascertaining all the facts in the case.

“The Committee of the House were, I believe, unanimous in awarding to you the merit of having made the first practical application of ether, and a majority by their report, awarded to you the entire credit of the discovery.

“Very respectfully, your obedient servant,
“DANIEL WEBSTER.”

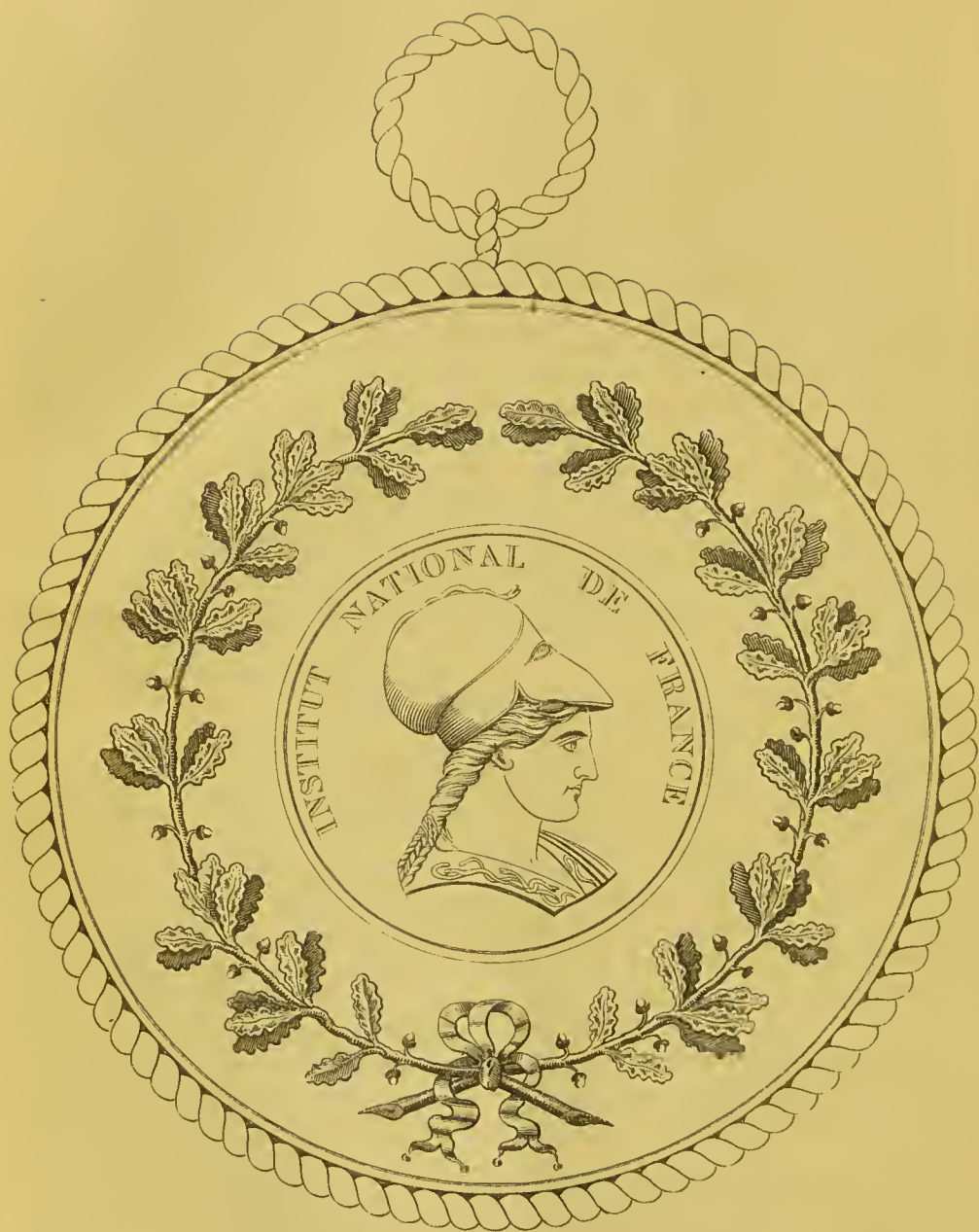
Before this tribunal, neither time, place, or circumstance, permitted bold and confident assertion to be mistaken for truth. With this award we think Dr. Jackson, Dr. Wells, and the scientific world should have been satisfied. It is, in the opinion of your committee, entitled to great weight. It was the *first*, and ought to have been the *only* contest. Our enlightened system of jurisprudence forbids, except under extraordinary circumstances, a *second trial of questions of fact*. It forbids it, as a guard against the danger incident to repeated investigations, that truth will be overborne by artfully manufactured evidence.

Therefore, even if the evidence before your committee rendered the question of fact doubtful, which it does not, they would hesitate long before they would overrule the decision of the Trustees of the Massachusetts General Hospital.

It is also a subject of much gratification to this committee, to be able to concur in the opinion of the former committee of the House, from whose very able report they have extracted so largely. They did not, however, feel themselves bound by either the one or the other, but gave the subject for themselves a full and careful consideration. But they are the more satisfied with the conclusions to which they have come, because of their concurrence with such high and unexceptionable authorities.

Dr. Jackson appeals to the Academy of Arts and Sciences at Paris, and claims that that learned body has decided the question of discovery in his favor, by awarding him the “*Monthyon prize for the greatest*









medical discovery," and that their decision ought to be taken as final and conclusive.

Your committee, for obvious reasons, would at once bow to the decision of that very learned society, (the centre and soul of scientific knowledge in Europe,) as to the fact of discovery, and that the honor of the discovery belonged to America, and also as to its merit and value among the discoveries of the age. But on the question, *Who was the discoverer?* their decision, if they made one, is entitled to much less weight. They are remote from the scene—had no means at an early day of possessing themselves of the evidence—and we have already seen how the minds of the members of the Academy were pre-occupied by Dr. Jackson's sealed letter of November 13, 1846, and his letter of December 1, directing the seal of the former letter to be broken. The temporary secrecy, with the form and circumstance of the disclosure, together with his European reputation for science, were, in the absence of any conflicting evidence or claim, well calculated to make a first impression in his favor.

But the Academy of Arts and Sciences at Paris did not, as it appears, award to Dr. Jackson the honor of the discovery, either directly or indirectly, by awarding him "*the Monthyon prize for the greatest medical discovery.*" Your committee have inspected the official awardments, exhibited by the parties, and find that the award to Dr. Jackson was "*one of the prizes of medicine and surgery of the Monthyon foundation.*" And M. Alexander Vattemare, in his letter to Dr. Morton, (see App.,) gives an extract from the formal decision made by that learned body, "between these two celebrated contestants," as follows:

"Mr. Jackson and Mr. Morton were necessary to each other. Without the earnestness, the preconceived idea, the courage, not to say the audacity of the latter, the fact observed by Mr. Jackson might have long remain unapplied; and but for the fact observed by Mr. Jackson, the idea of Mr. Morton might perhaps have been sterile and ineffectual;" "consequently, (he proceeds,) there has been awarded a prize of two thousand five hundred francs to Mr. Jackson for his observations and experiments upon the anæsthetic effects of sulphuric ether; and another of two thousand five hundred francs likewise to Mr. Morton "for having introduced the method in surgical practice after the indications of Dr. Jackson."

Dr. Morton has, within a few days, received the expression of the Academy in the more acceptable form of their largest gold medal. The prize awarded to him, as above stated, being of an amount not absorbed by the medal, has been appropriately used in enclosing it in a suitable golden frame. On the one side of the medal, in addition to the name of the institute, is a medallion head of the Goddess of Liberty. On the reverse, surrounded by a wreath of laurel is engraved—

"Académie des Sciences. Prix Montyon—Médecine et Chirurgie—Concours de 1847 et 1848. Wm. T. G. Morton, 1850."

Upon a full examination of the whole case so far as time and means were afforded to your committee, they have come to the conclusion—

1st. That Dr. Horæe Wells did not make any discovery of the anæsthetic properties of the vapor of sulphuric ether, which he himself considered reliable, and which he thought proper to give to the world. That

his experiments were confined to nitrous oxide, but did not show it to be an efficient and reliable anæsthetic agent, proper to be used in surgical operations and in obsterical cases.

For the rest your Committee have come to the same conclusions that were arrived at by the Trustees of the Massachusetts General Hospital at their meeting in January, 1848, and reconsidered and confirmed in 1849, and adopted by the former Committee of the House, viz :

2nd. That Dr. Jackson does not appear at any time to have made any discovery, in regard to ether, which was not in print in Great Britain some years before.

3d. That Dr. Morton, in 1846, discovered the facts, before unknown, that ether would prevent the pain of surgical operations; and that it might be given in sufficient quantity to effect this purpose, without danger to life. He first established these facts by numerous operations on teeth, and afterwards induced the surgeons of the hospital to demonstrate its general applicability and importance in capital operations.

4th. That Dr. Jackson appears to have had the belief that a power in ether to prevent pain in dental operations would be discovered. He advised various persons to attempt the discovery. But neither they nor he took any measures to that end; and the world remained in entire ignorance of both the power and safety of ether, until Dr. Morton made his experiments.

5th. That the whole agency of Dr. Jackson in the matter appears to consist only in his having made certain suggestions, which aided Dr. Morton to make the discovery—a discovery which had for some time been the object of his labors and researches.

Though it was but “a single step, and that a short one,” from the daily walks of science to this great discovery, yet the scientific world admits that the step was never taken prior to the 30th of September, 1846: and the discovery, when in fact made, was instantly appreciated and hailed by the surgical profession with the most exalted enthusiasm, almost with shouts of rapture. In a letter written fresh on the verification of the discovery in England, the grave and sedate Liston says:

“HURRAH!

“Rejoice! Mesmerism, and its professors have met with a ‘heavy blow, and great discouragement.’ An American dentist has used ether, (inhalation of it) to destroy sensation in his operations, and the plan has succeeded in the hands of Warren, Hayward, and others, in Boston. Yesterday, I amputated a thigh, and removed by revulsion, *both* sides of the great toe nail, without the patient’s being aware of what was doing, so far as regards pain. The amputation-man heard, he says, what we said, and was conscious, but felt neither the pain of the incisions, nor that of tying the vessels. In short, he had no sensation of pain in the operating theatre. I mean to use it to-day, in a case of stone. In six months no operation will be performed without this previous preparation.* It must be carefully set about. The ether must be washed, and purified of its sulphureous acid and alcohol. Shall I desire Squire, a most capital and ingenious chemist, to send you a tool for the purpose? It is only the bottom of Nouth’s apparatus, with a sort of funnel above, with bits of sponge, and, at the other hole, a flexible tube. Rejoice!

“Thine always,

R. L.”

*Of course, this is not to be considered as Mr. Liston’s deliberate opinion; but just the first flash of enthusiasm, at once natural and becoming, in the circumstances.

Mr. Velpeau, one of the most eminent surgeons of Paris, in his treatise on medical operations in 1839, says :

"To avoid pain in surgical operations is a chimera which it is not allowable to pursue at the present day. The cutting instrument, and pain, in operative medicine, are two words which never present themselves singly to the mind of the patient, and of which we must necessarily admit the association."

But in a communication to the Academy of Arts and Sciences at Paris, on the 27th of January, 1847, he speaks thus :

"I desire that the question of priority be immediately laid aside ; it does not appear, in effect, to have any foundation. To say that some one has stupefied, or put to sleep some dogs or hens, is nothing to the purpose ; for this action of ether has been known fifteen, twenty, thirty years and more. The Dictionaries of Medicine, Treatises on Medical Jurisprudence—that of M. Orfila, and the toxology of the last author in particular—indicate it formally. That which is new, is the proposition to render the patient totally insensible to pain, under a surgical operation, by means of inspirations of ether."

And the venerable and sage Dr. Warren, in his work on etherization, speaks in the following impressive and exalted strain :

"A new era has opened to the operating surgeon ! His visitations on the most delicate parts are performed, not only without the agonizing screams he has been accustomed to hear, but sometimes with a state of perfect insensibility, and occasionally even with the expression of pleasure on the part of the patient. Who could have imagined that drawing the knife over the delicate skin of the face might produce a sensation of unmingled delight ! that the turning and twisting of instruments in the most sensitive bladder might be accompanied by a beautiful dream ! that the contorting of ankylosed joints should co-exist with a celestial vision ! If Ambrose Paré, and Louis, and Dessault, and Chesselden, and Hunter, and Cooper, could see what our eyes daily witness, how would they long to come among us, and perform their exploits once more ! And with what fresh vigor does the living surgeon, who is ready to resign the scalpel, grasp it, and wish again to go through his career under the new auspices !"

The question of who was the discoverer, being thus, as the committee trust, placed beyond dispute, they turn their attention next to the *value* of the discovery.

It supplies a desideratum long sought by surgeons, for the relief of the excruciating pain they were necessarily obliged to inflict in the practice of their profession. They had, as heretofore stated, vainly attempted this relief by the use of opiates, extract of hemp, mesmerism, &c. ; but none fulfilled the desired purpose ; and their suggestion of the necessity to life or limb of an operation, was apparently ever doomed to be accompanied with the, to many, all absorbing feeling of terror of the pain which there was no known means of avoiding. Dread of pain has not unfrequently deterred from submission to operations necessary to the preservation of life. In other cases where this dread was overcome, and the operation performed, the severity of the suffering, and the shock to the system have been large elements in the production of a fatal result.

Since the introduction of etherization, both the patient and surgeon approach the operation with feelings entirely different from those formerly entertained under similar circumstances. The latter is relieved from the necessity of witnessing those manifestations of pain which his instruments formerly produced, and to ever become indifferent to which he must be more or less than human; while the former looks only to the end to be attained—the restoration to health—there being no intermediate pain to excite his dread, and fix his exclusive attention. For screaming, and struggles, and intense suffering under the surgeon's knife, etherization has substituted more or less complete exemption from pain, associated in some with the quietude, mental and corporeal, of deep sleep; in others, with pleasing dreams, imaginary busy scenes, and sweet music; and in others, with a perfect consciousness of surrounding objects and events, making the patient, perhaps, not among the least calm or most anxious spectators of the operation.

And its benefits are by no means confined to surgical patients and surgical practice. The obstetrician finds in it the means of alleviating that distress with which woman has ever heretofore been cursed, when in the act of becoming a mother. And who would not hail with delight, any means of ministering comfort to her who bears the holy name of mother? To the physician it affords one of the most useful, as it is one of his most prompt remedies. He, too, is often compelled to be the spectator of severe pain and distress, for the alleviation of which his before known remedies were powerless. He, before, had no reliable means of relieving the spasms of tetanus; he not unfrequently failed to procure sleep in *delirium tremens*, when the question is one of sleep or death; his before palliative remedy (opium) for the pain of colic, too often purchased temporary relief at the expense of an aggravation of the cause of the disease, and of increased difficulties in its cure; and he occasionally witnessed the breaking up of the system of a neuralgic patient, more as a consequence of the repeated large doses of opium to which he was constrained to resort for the mitigation of his paroxysms, during the slow progress of curative remedies, than of the disease itself. But an enumeration of all, or of any considerable number of the cases in which he finds it useful, nay indispensable, is neither required, nor would it be proper in a paper of this character.

It is no answer to this to allege that the discovery is capable of injury, or mischief. Ignorance of the proper use of anything leads to its abuse; and what is not abused, the use of which depends upon human judgment? Being of indispensable value to all, as all are liable to require its use, the committee deem the discoverer entitled to reward, as a benefactor of the human race. But his application rests not solely on that ground. The discovery is used by the United States Government, in the army and navy, and for that use the Government is clearly bound to compensate him; especially as they secured to him the use of the discovery by letters patent, Dr. Jackson having first assigned his claim to Dr. Morton. The committee have thought proper to annex the following extracts from the records of the Patent Office:

"I have therefore, in consideration of one dollar, to me in hand paid, the receipt whereof I do hereby acknowledge, assigned, set over and con-

veyed, and by these presents do assign, set over and convey to the said Morton and his legal representatives, all the right, title and interest whatever which I possessed in the said invention or discovery, a specification of which I have this day signed and executed in conjunction with him, for the purpose of enabling him to procure a patent thereon.

"And I do hereby request the Commissioner of Patents to issue the said patent to the said Morton *in his name* and as my assignee or legal representative to the extent of all my right, title and interest whatever in the said invention or discovery.

"In testimony whereof I have hereto set my signature and affixed my seal, this twenty-seventh day of October, one thousand eight hundred and forty-six.

"CHARLES T. JACKSON.

"(Witness :) R. H. EDDY."

"UNITED STATES PATENT OFFICE.

"Received this 10th day of November, 1846, and recorded in liber F 1, page 118, of Transfers of Patent Rights.

"In testimony whereof, I have caused the seal of the Patent Office to be hereunto affixed.

"EDMUND BURKE,
"Commissioner of Patents."

No. 4,848.

THE UNITED STATES OF AMERICA.

To all to whom these letters patent shall come :

"These are therefore to grant, according to law, the said Wm. T. G. Morton, his heirs, administrators, or assigns, for the term of fourteen years from the 12th day of November, 1846, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement."

Numerous instances have occurred, to which your committee beg leave to refer, in which compensation in money has been made by Congress, as a reward for like discoveries, of less importance to the country and mankind, namely :

PATENTS PURCHASED.

Tucker and Judge.—For the construction of anchors for the Navy, Statutes at Large, vol. 6, page 659, \$1,500.

Daniel Pettibone.—For the use of circular bullet moulds, Statutes at Large, vol. 6, page 833, \$5,000.

Boyd Reilly.—For the use of gas in vapor baths, Statutes at Large, vol. 6, page 904, \$5,000.

William H. Bell.—For elevating heavy cannon, and for pointing the same, Statutes at Large, vol. 5, page 126, \$20,000.

Isaac Babbit.—For the right of use of the patent anti-antrition metal, Statutes at Large, vol. 5, pages 547 and 636, \$20,000.

Heirs of Robert Fulton.—For the benefits conferred upon the country by his improvements in navigation by steam, Statutes at Large, vol. 9, page 660, \$76,300.

Anne M. T. Mix, widow of M. P. Mix.—For the purchase of Mix's manger stopper, Statutes at Large, vol. 9, page 82, \$3,000.

Doctor Locke.—For the free use by the United States of his invention of the magnetic clock, Statutes at Large, vol. 9, page 374, \$10,000.

R. S. McCulloh and James C. Boothe.—To purchase the right to use the improved methods of refining argentiferous gold bullion, Statutes at Large, vol. 9, page 530, \$25,000.

APPROPRIATIONS FOR EXPERIMENTS TO TEST PATENTS.

Samuel Colt.—Submarine battery, Statutes at Large, vol. 5, page 584, \$15,000.

Sarah F. Mather.—Submarine telescope, Statutes at Large, vol. 5, page 667, \$2,000.

S. F. B. Morse.—Electro magnetic-telegraph, Statutes at Large, vol. 5, page 618, \$30,000.

For testing inventions for preventing explosion of steam boilers, Statutes at Large, vol. 5, page 793, \$5,000.

——— Earle.—For the preservation of canvass, Statutes at Large, vol. 9, page 170, \$5,000.

Uriah Brown.—For testing steam fire ships, and shot proof steamships, Statutes at Large, vol. 9, page 173, \$10,000.

James Crutchett.—For testing solar gas lights and erecting fixtures, Statutes at Large, vol. 9, page 207, \$17,500.

——— Isherwood.—For testing light for lighthouses, Statutes at Large, vol. 9, page 323, \$6,000.

Charles G. Page.—To test the capacity and usefulness of electro-magnetic power for the purposes of navigation and locomotion, Statutes at Large, vol. 9, page 375, \$20,000.

Though fully satisfied of the value of the discovery, the committee thought it not proper to act upon their own unaided opinions. The chairman addressed circulars to the different hospitals, to medical institutions, to many of the most eminent physicians and surgeons in the United States, (see appendix,) and to the surgeons of the army and navy. The answers to these are very numerous; too much so, and too lengthy for publication, but have been perused, and their contents carefully noticed by the committee. Only two of this mass of letters speak disparagingly of the discovery, and one of those does not profess to speak from the writer's own observation. The committee annex extracts (see appendix,) from some of these answers, and a few entire letters, exhibiting the general opinion of the *value* of the discovery—its value being indisputable, and almost universally acknowledged, it was not deemed necessary to multiply extracts in its proof—and exhibiting likewise, the use of the discovery in the army and navy.

The committee would likewise call particular attention to the following letters from the Surgeon General and Staff, and the Chief of the Bureau of Medicine and Surgery and Assistant, addressed to Dr. Morton, and which were laid before the committee:

“SURGEON GENERAL'S OFFICE, *March 1, 1852.*

“SIR: In compliance with your verbal request to be furnished with information in regard to the employment of anæsthetic agents in the army

of the United States, and also for an expression of opinion as to the value and importance of this class of remedial agents, I have to state:

"That sulphuric ether and chloroform were used to some extent in the military hospitals established at the theatre of war in Mexico, but the use of those articles was not so general as at present, for the reason that the apparatus at that time believed to be essential to their proper and safe administration, was not adapted to service in the field.

"At the present moment it is believed that no surgical operation of importance is performed by the medical officers of the army without the aid of some anæsthetic agent.

"Previous to the discovery of this new application of sulphuric ether, the annual supply of that medicine was one pound for every hundred men. On the revision of the standard supply table, by a board of medical officers, in 1849, the pure washed sulphuric ether, was substituted for the ordinary sulphuric ether, and the quantity allowed was increased one hundred per cent. At the same time another anæsthetic agent, the tincture of chloroform, commonly called chloric ether, was added to the supply table, and is now regularly furnished to the medical officers in such quantities as, in connexion with the sulphuric ether, will suffice to meet all the demands of the service in this particular.

"Although the discovery of this new therapeutic effect of sulphuric ether has led to the introduction and employment of other anæsthetic agents, this does not in any way militate against the merits of the original discovery, which I regard as one of the most important and valuable contributions to medical science, and to the relief of suffering humanity, which has ever been made, the only discovery to be compared therewith being that of vaccination, which has rendered the name of Jenner immortal.

"Through the influence of these remedial agents, the surgeon is not only enabled to perform the most extensive and difficult operations, undisturbed by the cries and struggles of the patient, but what is of far greater importance, the patient being rendered insensible, escapes that shock to the nervous system, which in itself is not unfrequently fatal. For this reason operations can now be performed with much more safety than heretofore, and that too, in cases in which the attempt to perform them would have been forbidden by the general condition of the patient.

"To the physician this class of remedial agents promises to be of the greatest utility, though their application in the treatment of disease has yet to be more fully developed.

"It will suffice at this time to allude to their employment for the relief of suffering woman in the hour of her greatest trial, and at the moment she claims our warmest sympathies. That these agents can be safely used in parturition, so as to afford full and entire exemption from pain to the mother, and with safety both to her and to the child, has been amply demonstrated.

"In conclusion, permit me to congratulate you upon the flattering testimonial you have received from the National Institute of France, for this discovery, and to express the hope, that inasmuch as it is impossible for you to derive any pecuniary benefit therefrom in ordinary course by letters patent, you may receive from your country that acknowledgment of

your merit, which is due to one who has conferred so great a boon upon mankind.

I am very respectfully, your obedient servant,
 W. T. G. MORTON, M.D.,
Brown's Hotel, Washington, D. C.
 TH. LAWSON,
Surgeon General.

"SURGEON GENERAL'S OFFICE, *March 10, 1852.*

"SIR: The undersigned take pleasure in adding their testimony to the mass of evidence you have already accumulated in regard to the value and importance of the discovery of the anæsthetic properties of sulphuric ether, and the consequent introduction of a new class of remedial agents into the practice of medicine and surgery.

"The more general and important advantages which surgeons and physicians, as well as patients, have derived from this great discovery, are so fully yet concisely set forth in the communication addressed to you a few days since by the Surgeon General, as to need no repetition here, and we therefore prefer alluding to an application of this class of remedial agents; which, so far as we have seen, has not been mentioned by your correspondents.

"We refer to their employment in the army and navy for the detection of feigned diseases. The consummate art oftentimes displayed by malingerers who are desirous of procuring their discharges from the service, or to escape unpleasant duty, is such as not unfrequently to baffle the skill of the most experienced medical officers. It is not enough in these cases to *suspect* that disease is feigned—humanity requires that the fact of malingering be *proved*, before the kind offices of the physician are refused. In many instances the use of anæsthetic agents will afford this positive proof, and although we do not recommend or advocate their employment for this purpose as a general rule, we nevertheless believe that in some cases it is the duty of the medical officer to resort to them, to satisfy his doubts.

"In illustration of the foregoing remarks, we refer you to the enclosed copies of proceedings instituted in this office in January, 1849, in the case of Charles Lanke, formerly a private of artillery, who applied for a pension on account of alleged ankylosis of the knee joint, and to whom the sulphuric ether was administered by yourself, in the presence of Dr. Edwards, of Ohio, and several other members of Congress.

"Very respectfully, your obedient servant,

"H. L. HEISKELL,
Surgeon U. S. Army.

"RICH'D. H. COOLIDGE.

"*Ass't Surgeon U. S. Army.*

"W. T. G. MORTON, M. D.,
"Brown's Hotel, Washington, D. C."

"SURGEON GENERAL'S OFFICE, *January 22, 1849.*

"SIR: I have the honor to acknowledge the receipt of your letter of the 18th instant, by the hands of Charles Lanke, formerly a soldier in the army, who has been charged with malingering."

"In accordance with your desire, I caused a careful examination to be made by two medical officers of the army, whose report is herewith enclosed.

"As the most reliable means of ascertaining the true condition of this man's limb, these gentlemen endeavored to place him in a state of *insensibility*, by the inhalation of washed sulphuric ether. The cause of their failure in rendering him insensible, is explained in their report; and I may also add, that during the short time I was called to be present, I had good reason to think that the man strongly resisted the efforts of the two medical gentlemen to render him insensible.

"Lanke has again been here this morning with an interpreter, and has had explained to him that whenever he shall consent to be rendered insensible, and it is found that his knee joint still remains immovable, he shall have the benefit of a certificate to that effect.

"Very respectfully, your obedient servant,

"By order: .

H. L. HEISKELL,

"*Surgeon U. S. Army.*

"HON. CHARLES BROWN, *House of Reps.*"

"SURGEON GENERAL'S OFFICE, *January 20, 1849.*

"SIR: In compliance with your instructions we have made a careful examination of the alleged disability of Charles Lanke, formerly a private of Captain Sherman's company of 3d artillery, and beg leave to report:

"That we can find no mark of severe injury received on his knee, no deep cicatrix of the integuments, and no scarification, &c., such as would have been made in the course of treatment for an inflammation of the knee-joint.

"We can find no evidences of any injury to the bones, and express our doubt whether a simple contusion would have caused such a permanent stiffness of the joint.

"As the only means at our disposal to test the question of malingering, we endeavored to place him under the influence of the washed sulphuric ether, in order to create insensibility to our manipulations.

"This we were unable to do, the patient evidently resisting by holding his breath, &c., and when apparently about to fall under its influence, refusing to breathe it at all, by pushing the assistant from him, when about to add an additional supply of ether.

"We feel fully persuaded that the patient did use considerable muscular force and an evident effort of will to resist the bending of the limb, in the course of the experiment.

"As the result of our examination we would respectfully submit the following opinion, that we do not think that we should be justified in giving a certificate of disability to Charles Lanke; but still there being a bare *possibility* that *injustice* may be done the man, we are willing to repeat the trial by ether, which is truly an "*experimentum crucis*," whenever the applicant for pension shall state his readiness to submit.

"R. H. COOLIDGE.

"*Assist. Surgeon U. S. Army.*

"ALEXR. S. WOTHERSPOON,

"*Assist. Surgeon U. S. Army.*

"Dr. H. L. HEISKELL, *Surgeon U. S. Army.*"

"SURGEON GENERAL'S OFFICE, *January 26, 1849.*

"SIR: I have the honor to inform you that Charles Lanke, having expressed his willingness to be rendered insensible by ether, that article was this day administered to him by Dr. Morton, of Massachusetts, in the presence of Dr. Edwards, and a number of other members of Congress and medical gentlemen.

"Having come fully under its influence, the limb was completely flexed without force, proving conclusively that the stiffness of the knee-joint was altogether feigned.

"From the mingled distress and surprise exhibited by Lanke on recovering his consciousness, at seeing his leg bent at a right angle with the thigh, it was apparent that the sudden recovery of the motion of his knee-joint was anything else than welcome.

"Very respectfully, your obedient servant,

"By order:

H. L. HEISKELL,
"Surgeon U. S. Army.

"Hon. CHS. BROWN, *House of Reps.*"

"SURGEON GENERAL'S OFFICE, *February 27th, 1852.*

"SIR: It affords me pleasure to bear testimony to the high value of anæsthetic agents, both in the practice of surgery and medicine.

"I consider it the greatest improvement of the century. It is now an indispensable agent in the alleviation of pain during surgical operations, and in the amelioration of many distressing symptoms and diseases of daily occurrence. Its many uses are only beginning to be appreciated by the medical profession, and it is impossible to say what limits may be placed to its employment. Too much cannot be said in praise of this class of remedial agents.

"Very respectfully, your obedient servant,

"A. S. WOTHERSPOON,

"Assistant Surgeon U. S. Army.

"Dr. W. T. G. MORTON."

"NAVY DEPARTMENT, BUREAU OF MEDICINE AND SURGERY,

"*February 26, 1852.*

"SIR: As the views of this bureau are desired in regard to the importance attached to the different anæsthetic agents by the medical officers of the navy, it gives me pleasure to express the high sense entertained by them of their great utility, not only in surgical practice, but as powerful agents in many painful affections, which have resisted the ordinary remedies. This opinion is strengthened by the concurrent testimony of the ablest civil practitioners of our own country, with the emphatic endorsement of their value, by the best British and continental surgeons. In the absence of statistical information, accurately made up, it is somewhat difficult to estimate the relative value of these ethereal preparations; but if the recorded opinions of professional men, as expressed in the various medical journals of this country and Europe, are deemed of any weight, the discovery of etherization as a means of avoiding pain in

severe surgical operations, may be considered the most important, in a philanthropic view, which this century has produced.

"The observation that exhilarating effects resulted from the inhalation of ether is no recent acquisition to medical science; but the novelty and gist of this discovery consists in finding that nervous perception is suspended under the influence of the etherial inhalation, and while so suspended, the patient is unconscious of pain while under the operation of the knife.

"In addition to the great benefit derived from its use in alleviating pain, it has a decided effect in diminishing mortality. Its advantage in this respect appears to be in saving the system from the severe shock and nervous exhaustion which attend most of the graver surgical operations, and which of themselves often prove fatal.

"It dispels the fear of pain, which formerly prevented many from submitting to an operation, or induced them to defer it until too late.

"It enables the surgeon, also, to operate more coolly and effectually, undisturbed by the cries and struggles of the patient, which sometimes unnerve the steadiest hand, and render abortive the best directed efforts.

"The medal of the first class, awarded to you by the 'Medical Institute' of Paris, evinces the high estimation entertained in that centre of medical science and intelligence, of the services you have rendered to humanity.

"It is earnestly hoped that our Government, with a similar appreciation of this great acquisition to medical science, will stamp their sense of its importance, by a substantial acknowledgment which, while it encourages the philanthropist in his efforts to meliorate the condition of his fellow men, will remunerate you in some measure for the toil and vexation attendant on your struggle for success.

"Respectfully your obedient servant,

"THO. HARRIS,

"Chief of the Bureau of Medicine and Surgery.

Mr. WM. T. G. MORTON, M. D., Washington.

"NAVY DEPARTMENT, BUREAU OF MEDICINE AND SURGERY,

"March 11, 1852.

[*Extracts.*]

"I would state, however, that in the single capital operation in which the etherial inhalation was employed by me, it was attended with the happiest results, and impressed me with such a forcible conviction of its importance, that I deem it indispensable, as a general rule, in all serious surgical cases requiring the use of the knife.

"Its application in general practice is becoming daily and more enlarged, as its peculiar influence over the nervous system and 'perceptive' powers is developed; and the physician or surgeon who banishes it from his pharmacopæia, is neglecting one of the most potent weapons presented for his use, since the great discovery of Jenner.

"Upon the whole I have no hesitation in expressing the opinion that this discovery, when divested of the prejudices attending in some minds the introduction of all novelties, and when the accidents inseparable from its abuse or ignorant application, are ascribed to their proper

causes, will take its rank as among the most valuable acquisitions which have ever been made to medical science.

“With great respect, your obedient servant,

“S. R. ADDISON,

“*Passed Assistant Surgeon U. S. Navy.*

“W. T. G. MORTON, M. D., *Washington City.*

Inquiries were also instituted into its effect upon mortality, and especially of surgical operations. To be fully satisfactory, inquiries of this character should extend through a long series of years, and embrace very many cases, the results of which have been carefully observed. The discovery being of recent origin, no opportunity for inquiries and observations to such extent has been afforded. The answers to such inquiries, where received in specific form, have embraced one class only of operations, viz: amputations of thigh, leg, and fore arm. The statistics thus acquired, the committee believe to be reliable, as they are derived from the surgeons of the army and navy, from a few hospitals, and from eminent surgeons in civil practice. The result is appended in the following table, accompanying which will be found Prof. Simpson's European tables:

Amputations of the thigh, leg, arm, and fore arm, communicated to the committee, with their results. The greater number of those in which the patients were not etherized, were performed before the discovery of the anæsthetic properties of ether and chloroform.

Not etherized.	Of whom died.	Etherized.	Of whom died.
227	40	185	10

No. viii.—*Table of the Mortality of Amputation of the Thigh, Leg, and Arm.*

Reporter.	No. of cases.	No. of deaths.	Per cent. of deaths.
Parisian Hospitals—Malgaigne -	484	273	57 in 100
Glasgow Hospital—Lawrie - -	242	97	40 in 100
General Collection—Phillips . -	1369	487	35 in 100
British Hospitals—Simpson - -	618	183	29 in 100
<i>Upon patients in an etherized state</i>	302	71	23 in 100

Six hundred and sixty-nine cases of anæsthesia in obstetrical practice are likewise reported in Professor Simpson's work—"Anesthesia in Surgery and Midwifery"—and a tabular statement of five hundred and sixteen cases in Dr. Channing's work—"Etherization in Childbirth"—the result being highly satisfactory.

Great Britain, France, and all other enlightened nations, have, from time immemorial, rewarded munificently such services to humanity. The British Parliament, by two successive statutes, bestowed upon Jenner the sums of ten thousand and twenty thousand pounds for the discovery of vaccination. The world has as yet produced but one great improvement in the healing art deserving to be ranked with that of Jenner.* America, by annihilating pain, has done as much for the bene-

[* *Extracts from the British and Foreign Medico-Chirurgical Review, for April, 1852.*]

Applications of Anæsthesia to Surgery, Midwifery, and Dentistry.—Of the desirableness of the subjugation or annihilation of pain in surgical operations, considered in itself, we cannot, on the whole, for a moment doubt; to disarm the operating table of a great portion of its terrors, is indeed a triumph of which our age may be justly proud. Not only is the actual pain of an operation thus removed, but also, in great part, that indescribable horror which often torments the patient for some time previously. Men of the greatest courage in other respects, and who have faced danger and death in many forms, have yet shrunk from the prospect of the slow and cold blooded torture they had before them from the knife of the surgeon. Indeed, however man may summon his fortitude to meet physical pain, or any other dire misfortune, we must all bow to the laws of humanity, and *feel* the severity of fate, in spite of the efforts of our moral nature to rise above it. But when we find that this great relief which anæsthetic agents afford, is to be obtained almost without risk, and on the whole with very beneficial results otherwise, we should receive this great discovery with gratitude and exultation. So complete is the general use of anæsthetic agents, that the element of pain as an obstacle or source of danger or of terror in surgery, is for ever almost destroyed. Manual and instrumental therapeutics, as a branch of *materia medica*, now proceeds, says M. Bouisson, “in the silence, as it were, of vegetative life, and its salutary mutilations are only made known by changes of form without any painful sensation having been experienced by the organism.” True it is, as has been already shown, there are exceptions to the general rule; but they are so rare as not to militate practically against it.

Besides the applications of anæsthesia to operations, it may be employed in surgery most usefully to favor the diagnosis of some cases. Professor Miller recommends its use in the examination of some female diseases, to save the delicacy and modesty of the patients. There are some diseases which cannot otherwise be diagnosed without pain. For instance, in some diseases of the eye there is such intense photophobia, with spasmodic contraction of the eyelids on the entrance of light into the eye, that it is very difficult to open the eyelide, so as to make a proper examination of the organ itself. In such cases, a moderate degree of anæsthesia will often overcome the resistance of the orbicularis, and destroy for a time the sensibility of the retina, so as to allow of the examination being made. In many accidents the pain renders it difficult to allow of the garments of the patient being removed, and the parts injured being properly examined. In burns it is often difficult to remove the scorched clothes, burned as it were into the skin. In many painful affections of the vagina, accompanied by constriction, it is often hardly possible to use the speculum. Cases of painful catheterism may also be adduced, and necessary exploration of the urinary canal and bladder. In such cases, and in others which can easily be imagined, as in affections of children, when the struggles of the patient afford an obstacle, and in many instances of feigned disease, as we shall see under our fourth head, the services which anæsthesia may render to diagnosis are considerable. * * *

By overcoming pain, it has caused many operations which used to be as rarely performed as possible, to come more in the way of the surgeon: the removal of nails, and the operation of the actual cautery, need no longer inspire horror to the operator or to the patient. With the view of removing muscular resistance, its use has become general in the reduction of dislocations and the operation of the taxis. * * *

The diminution of the shock to the nervous system seems to favor the healing of wounds, and altogether increases the chances of recovery. The shivering and re-actio fever which often follow operations are greatly diminished by etherization; there is generally more sleep, and more complete feeling of comfort. * * *

It is not necessary to point out the occasional benefit which may be derived from the use of anæsthesia in the taxis, in the reduction of dislocations, and setting of fractures. In all this class of surgical operations, cases must be continually occurring, proving to the surgeon the immense results which he may reap from the new discovery. * * *

Anæsthesia is now used in private and in public practice, as regularly in lithotomy as in other operations. * * *

Henceforth, even the cock-pit of a man-of-war, and the hospital after a field of battle, will be disarmed of half their terrors. * * *

fit of the 'race, as England did when she furnished the instrument by which the small pox may be finally exterminated. It would be unworthy our greatness, and our destiny, as the nation soon to be the most powerful on the globe, to undervalue a benefaction to mankind, which is the peculiar glory of science, of our age, and of our country.

Your Committee therefore recommend, that an appropriation be made for the benefit of Dr. W. T. G. Morton, to be paid to him in consideration of his discovery of the anæsthetic properties of the vapor of sulphuric ether, and of his public and successful application of the said pain-destroying agent in surgical operations, and of its use in the army and navy of the United States, and conditioned that he surrender to the United States his patent for the discovery. The majority of the Committee, in view of its use as above mentioned, and of the incalculable value of the discovery to the whole world, are of the opinion that one hundred thousand dollars would not be an unreasonable appropriation for that purpose. They herewith report a bill. [The Committee on Naval Affairs, House of Representatives, and the Military and Naval Committees of the Senate, fully concur in the recommendation.—See pp. 92, 100.]

W. H. BISSELL, M. D. of Illinois,
 JOS. SUTHERLAND, of New York,
 ROBERT RANTOUL, jr. of Massachusetts.
 GRAHAM N. F. CH, M. D., one of the
 Regents of the Smithsonian Institute Professor Institute and
 Practice of Medicine sh Medical College.

OFFICE, HOUSE OF REPRESENTATIVES, U. S.,
 CITY OF WASHINGTON, *June 28, 1852.*

I, John W. Forney, Clerk of the House of Representatives of the United States of America, do hereby certify, that the accompanying printed document is a true copy of the report agreed upon by the Select Committee of the House of Representatives on the memorial of Doctor William T. G. Morton, for the discovery of etherization, and will be presented to the House of Representatives when the said Select Committee shall be called upon to report in the regular order of the business of the said House.

 * SEAL. *

In testimony whereof, I have hereunto affixed my signature and the seal of the House of Representatives of the United States, this twenty-eighth day of June, in the year one thousand eight hundred and fifty-two.

ATTEST:

JOHN W. FORNEY,
Clerk of the House of Representatives, U. S.

The argument in favor of the employment of anæsthesia [in midwifery] may be summoned up as follows:

1st. The removal of the pain is beneficial to the mother by preventing the nervous excitement and shock which physical pain is apt to excite, and the nervous and inflammatory reaction which, in some constructions, is apt to result.

2nd. It renders many operations, requisite in complicated labors, easier of performance, and more beneficial to the patient.

3rd. Statistics prove the practice of anæsthesia to be beneficial to the mothers, and nowise dangerous to the children. * * *

AN ACT FOR THE RELIEF OF WM. T. G. MORTON.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of War and the Secretary of the Navy be, and they are hereby authorized and instructed to receive from Wm. T. G. Morton his patent right for the use of sulphuric ether in producing insensibility to pain during surgical and other operations, which is at present in use or may hereafter at any time be introduced into the hospitals of the army and navy, the penitentiary of the United States, and board of the national shipping; and there shall be paid to the said Wm. T. G. Morton, the sum of *one hundred thousand dollars* out of any money in the treasury not otherwise appropriated, in full compensation for the surrender of all his rights under the said patent: *Provided, however,* That the said Wm. T. G. Morton shall surrender all right, interest, and benefit from the above letters patent to the Commissioner of Patents

Dr. Simpson, in 1848, communicated the results obtained in 1519 cases, and in our opinion established the utility of anæsthesia [in midwifery] upon incontestable grounds. * * *

Therapeutical Applications of Anæsthesia.—It is now evident that the use of anæsthetic agents is capable of an extension beyond the bounds of merely operative medicine. It has been transported into medicine itself; and perhaps this circumstance may attract the attention of the profession to the advantages which may accrue from the use of other remedies in the form of inhalations. When we consider the great extent of the pulmonary mucous membrane, and the facility with which vapors may be introduced through the respiration into the blood, it seems extraordinary that this mode of administering medicines has not been more exactly studied. * * *

Pain exists in a vast number of diseases, where even opium is insufficient to afford relief; in such cases a field is opened to the use of anæsthetic agents. * * *

In several cases of intense facial neuralgia, benefit has been obtained from the inhalation of chloroform, when all other remedies have failed. In pains of the bowels, gastralgia, and in nervous colics, similar results have followed. Many observers have pointed out the benefit derived from doses of chloroform in the liquid form, in relieving the pain at the early stages of cholera. * * *

In tetanus many favorable cases have been reported. * * *

In mental alienation anæsthesia has been a good deal used. * * *

Anæsthetic agents have been applied locally in the way of frictions, in nervous and rheumatic pains, in painful ophthalmia, and in orchitis. Under the hands of some it has been found exceedingly successful in relieving pain, and subduing inflammation, and in the dressing of ulcers.

It is very plain to us that we are only at the beginning of the medicinal use of these agents.

Applications to Legal Medicine. Simulated dumbness, deafness, and stammering, can be detected.

See page 86 of this report.

APPENDIX A.

Resolution from the Committee on Naval Affairs of the House of Representatives.

RESOLUTION.

Resolved, That the Committee on Naval Affairs of the House of Representatives agree in the propriety of the appropriation for Dr. W. T. G. Morton, for the discovery of etherization, recommended by the Select Committee of the House of Representatives on that subject, and adopt the suggestions of the Chairman of the said Select Committee, [hereto annexed,] to offer the same as an amendment to the bill making appropriations for the naval service, in conformity with the views of the Secretaries of War, Navy, and Treasury Departments, as expressed in their correspondence with this committee, [see correspondence annexed.]

FREDERICK P. STANTON, of Tennessee,
THOS. B. FLORENCE, of Pennsylvania,
ROBT. GOODENOW, of Maine,
S. W. HARRIS, of Alabama,
E. CARRINGTON CABELL, of Florida.

HOUSE OF REPRESENTATIVES U. S., *May 31, 1852.*

SIR: I have the honor to inform you that the Select Committee of the House of Representatives, to whom was referred the memorial of Dr. William T. G. Morton, asking remuneration from Congress for the discovery of the anæsthetic properties of sulphuric ether, have agreed upon a report, (a copy of which is enclosed,) which they are awaiting an opportunity to present to the House. You will observe that in this report the committee fully recognise the inestimable benefits conferred upon the human race by this discovery, and believing that the example of the enlightened nations of the old world, in awarding munificently those who have rendered important services to humanity, is particularly worthy of imitation in the present instance, have determined to report a bill appropriating the sum of one hundred thousand dollars to Dr. Morton as a compensation for his discovery, and in consideration of the surrender to the United States of all right and interest which he now holds in that discovery, in virtue of letters patent granted to him by this Government.*

* WASHINGTON, *January 5, 1847.*

DR. W. T. G. MORTON, *Boston, Mass.*

DEAR SIR: Yours of the 26th ult. was received in due course of mail, and in answer I have to say, that, at the time your application for preventing pain in surgical operations was under consideration in the Patent Office, Mr. Eddy consulted me on the *novelty and patentability of your discovery*. I then examined the subject carefully, and gave it as my decided and candid opinion that it was novel, and the legitimate subject of a patent; and this opinion has only been strength-

The sum abovementioned will, it is believed, not be deemed too large,* when we remember the benefits which have been conferred, and when we consider the fact that, contrary to that provision in the Constitution which declares that "private property shall not be taken for public use without just compensation," this nation has been for years, and is now daily availing itself of the advantages to be derived from this new

ened by further reflection. Under the law, any new and useful art is made the subject of a patent. This covers any discovery in modes of procedure having a useful object in view, and susceptible of being so defined as to instruct others to apply or make use of the mode of procedure. There can be no question that your discovery comes under this provision of law. It is a new mode of procedure, definite in its character, and which may be taught to others, and which, therefore, comes under the denomination of an art, as defined by the ablest judges in Europe and in this country.

Before your discovery, many attempts had been made to render persons insensible to pain, preparatory to surgical operations, by introducing into the stomach intoxicating substances; but this mode of procedure was unsuccessful. You then discovered that, by introducing into the lungs the vapor of certain substances, a different effect was produced from that of intoxication produced by the introduction of substances into the stomach, and that this effect was such as to render the patient insensible to pain: hence the use of this discovery, in connection with surgical operations, is an improvement in the art of surgery. A discovery in the abstract is not the subject of letters patent; as the discovery of the elastic force of steam; of the pressure of the atmosphere; of the expansion of metals under the influence of caloric, &c.; for this is the mere finding out of something existing before.

The mere discovery in these cases had no direct useful application in the arts or affairs of life, and could not be appropriated to the sole use of the discoverers; but the moment any one of them could be applied to a useful practical purpose, then the party so applying it produces a useful result; and such application, originating in the mind of the discoverer or inventor, is no longer a discovery, in the abstract, of something before existing, but a new creation, which, having its origin in the mind of the discoverer, and not existing before, (for it is an artificial condition,) is, in view of the law, the property of the one who conceived it. There can be no question that the one who first conceived the idea of intoxicating a patient, preparatory to a surgical operation, would have been entitled to a patent for his new mode of procedure; how, then, does your plan differ from his? You conceived the idea that, by introducing the vapor of certain substances into the lungs, a different condition of the nervous system was produced, viz: A state of insensibility to pain; and, by connecting this mode of producing this state of insensibility to pain with surgical operations, you have produced a new and useful result, highly important in the art of surgery; the result of a new conception, originating in your mind, and legitimately the subject of letters patent. Your invention is the connexion of the two processes or modes of operation.

Before the date of Watt's invention of the steam-engine, the expansive force of steam had been applied to a piston in a cylinder, and it was well known that, by the application of cold water, steam could be condensed in a vessel to effect a vacuum; and all that immortalized that great man was the union of these two ideas, or modes of procedure: applying the force of steam in one vessel, and condensing it in another. In a legal point of view, your invention does not differ from this, which has been admitted to be patentable by all the legal knowledge of the world, and the universal consent of civilized man.

I am, sir, yours, very respectfully,

CHARLES M. KELLER, *for Keller & Greenough.*

FEBRUARY 19, 1847.

I concur in the foregoing opinion entirely; entertaining no doubt that Dr. Morton's discovery is a new and useful art, and, as such, the proper subject of a patent.

DANIEL WEBSTER.

I have examined the question of the patentability of Dr. Morton's discovery of the anæsthetic property of ether, and its applicability to surgical operations, and entertain no doubt as to the validity of the patent, or of his exclusive title thereto.

J. M. CARLISLE, *Washington.*

**Extract of a letter dated Patent Office, Washington, November 16, 1846.*

It will of course be a source of great pecuniary profit. It must of course, come into general use, and licenses at moderate rates will produce a large revenue.

EDMUND BURKE,
Commissioner of Patents,

agent, by employing it in her navy and army, and in other public institutions, without compensating the discoverer, and that too, after having issued a patent guaranteeing to him the full and exclusive privileges and rights accruing from his discovery. In view of these considerations, and of the fact that although nearly six years have elapsed since this discovery, no pecuniary benefits have been derived therefrom by the discoverer, and looking, also, to what is just and right from a great government to the greatest benefactor of the human race of the present age, it is very desirable that his award should be no longer delayed.

The object of this communication, therefore, is to urge upon your consideration the practicability and propriety of attaching the bill above referred to, to the "Naval Appropriation Bill" for the ensuing fiscal year.

For your further information in regard to the use of this agent in the army and navy, I enclose copies of letters from the Surgeon General of the Army, and from the Chief of the Bureau of Medicine and Surgery of the Navy, (see pages 82 and 86,) which may be useful to you, in case you deem it proper or necessary to communicate on this subject with either the Secretary of War or of the Navy.

Very respectfully, your obedient servant,

W. H. BISSELL.

Hon. FRED. P. STANTON, *Chairman Committee on Naval Affairs, House of Representatives.*

Upon the receipt of the letter from the Chairman of the Select Committee upon the Memorial of Dr. Morton, Mr. Stanton addressed the following letter respectively to the Secretaries of War, Navy, and Treasury :

WASHINGTON, *June 7, 1852.*

SIR: I have the honor to transmit to you the enclosed communication from the Hon. W. H. Bissell, with the copies of letters from the Chief of the Bureau of Medicine and Surgery of the Navy, and the Surgeon General of the Army, and other documents therein referred to, all of which relate to the memorial of Dr. William T. G. Morton, asking remuneration from Congress for the discovery of the anæsthetic properties of sulphuric ether.

I concur in most of the views and opinions expressed by Col. Bissell as to the propriety and justice of compensating one who is so eminently entitled to the gratitude not only of his countrymen, but of the world at large, especially when Dr. Morton presents himself as the sole patentee of the discovery, and seeks, on condition of the surrender of his patent, remuneration for the benefits which are alleged to have been received therefrom by the Government, through its constant use in the army and navy during the war with Mexico,* and up to the present time. But in

* It is impossible not to perceive that the fact of the Government having disregarded Dr. Morton's patent, and appropriated his discovery to the public service without compensation, was attended with consequences far more injurious to his rights than the mere neglect or refusal to compensate him for the use of his property. Nothing could have struck more fatally at the validity of his patent, in public opinion, than the open infraction of it by the very Government from whom it had been purchased. Its direct tendency and practical effect, were to proclaim to the public that the patent was no obstacle in the way of the use of the discovery, without the license of the patentee. Accordingly it is a fact which has been made evident to the committee by a comparison of facts and other evidence, that although numerous sales were made by Dr. Morton prior to the public announcement that the use of ether had been adopted in the public service, (New York Herald and other papers,) not a single application was made to him after that fact became generally known.

order to comply with Col. Bissell's suggestion, by submitting the matter to the Committee on Naval Affairs of the House of Representatives, I deem it appropriate and necessary to procure the views of the Department in an official form.

Supposing that you will concur in the views expressed by the Chiefs of the Medical Corps of the Army and Navy, in the concluding paragraphs of their communications on the subject, I do not doubt that you will give the proposition of the Hon. Mr. Bissell, a fair and liberal consideration.

I am, very respectfully, your ob't servant,

FRED. P. STANTON.

The following replies have been received:

TREASURY DEPARTMENT, *June 25, 1852.*

Sir: I have the honor to acknowledge the receipt of your letter of the 17th instant, covering copies of a communication from the Hon. W. H. Bissell, of a letter from the Chief of the Bureau of Medicine and Surgery of the Navy, and of a letter from the Surgeon General of the Army, with certain printed matter, all relating to the memorial of Dr. Wm. T. G. Morton, asking remuneration from Congress for the discovery of the anæsthetic properties of sulphuric ether.

An attentive examination of these several documents has satisfied me that sulphuric ether and tincture of chloroform are very generally used in the army and navy of the United States,* as anæsthetic agents; and the decided testimony borne to the merits of these ethereal preparations by the Chief of the Bureau of Medicine and Surgery of the Navy, and the Surgeon General of the Army, leaves no doubt upon my mind as to their great value in medical and surgical practice. In addition to the evidence thus afforded in their favor, I may mention the fact that these agents now form a part of the regular medical supply to the marine hospitals of the United States, and that they are employed therein with very general success.

Regarding the discovery of the anæsthetic properties of sulphuric ether, as, in the language of Surgeon General Lawson, "one of the most important and valuable contributions to medical science, and to the relief of suffering humanity, ever made," I concur entirely with Col. Bis-

* *Extract from a report of the Surgeon General to the Secretary of War.*

"During the three years immediately preceding, and the three years of peace subsequent to the Mexican war, the average annual number of wounds and injuries treated in the army has been 2,592." * * * "These agents (ether and chloroform) may be useful in all the amputations, in many of the fractures not requiring amputation, in a number of luxations, gunshot wounds, and other injuries requiring an operation; also in a number of diseases, such as strangulated hernia, calculus, hæmorrhoids, fistulas, tumors, &c., requiring the knife, including cases of delirium tremens, and occasionally a case of parturition."

Dr. Richard H. Coolidge, of the Surgeon General's Office, says: "I have examined the reports of sick and wounded from the army during the recent war with Mexico. I find that the number of gun-shot wounds reported, amounts to 3,949, and that of all other wounds and injuries, to 5,932, making a total of 9,881; which number probably falls far short of what actually occurred."

Extract of report of Bureau of Medicine and Surgery to the Secretary of War.

"The number of wounds and injuries of all kinds requiring medical treatment in the naval service during the year 1850 was 1,379."

Neither of the above reports includes wounds and injuries treated in the fifteen U. S. Marine Hospitals.

sell and yourself, as to the propriety and justice of liberally compensating the patentee, who has not at any time received pecuniary advantage* from his discovery, and who now appeals to the Legislature of his country, on condition of the surrender of his patent for the benefit of mankind, for proper remuneration in lieu of the gains that he would have derived had he been protected in the use of the rights conferred upon him by letters patent of the Government. I therefore recommend that such reasonable and liberal sum, as the committee of which you are chairman may in their discretion determine upon, be reported as a *national compensation* to Dr. Morton, and that the same be attached, as proposed by Col. Bissell, to the "naval appropriation bill" for the ensuing fiscal year.

I have the honor to be, very respectfully, your obedient servant,
 THO. CORWIN,
Secretary of the Treasury.
 Hon. FREDERICK P. STANTON,
Chairman Naval Committee House of Reps.

WAR DEPARTMENT,
 Washington, June 21, 1852.

SIR: I have received your letter of the 7th instant, enclosing sundry documents relating to the memorial of Dr. William T. G. Morton, who seeks remuneration from the Government for the discovery of the anæsthetic properties of sulphuric ether.

In reply I beg leave to state that I have no information on the subject of this discovery other than that which I have derived from public rumor and from the documents you enclose, it being exclusively a professional question. All the information which this department could furnish the committee is contained in the letter from the Surgeon General, which is among the papers you enclose.

Judging from this information, there can be but little doubt that this discovery is one of the most valuable contributions that science has ever made to the cause of humanity.

* BOSTON, April 20, 1852.

Dr. W. T. G. MORTON—*Dear Sir*: As by the terms of the agreement made between yourself and me on the 30th day of October, 1846, I am required as often as once in six months to render you an account of the net profits resulting from sales of certain patents, etc., as will appear by reference to said agreement. I have now to inform you, and do inform you, that up to this date, April 2d, 1847, I have received no net profits on account of any, and therefore can render you no further account than this, or pay to you any moneys resulting from any net profits received.

Yours, respectfully,

R. H. EDDY.

[*Extract from a letter written by Caleb Eddy, Esq., of Boston, to Hon. Robert C. Winthrop, Speaker of the House of Representatives 30th Congress.*]

"To my knowledge he has spent large sums of money, and I think deserves some consideration in return."

[*Extracts from letters written in 1848, to the Trustees of the Massachusetts General Hospital, by B. F. Brooks, an eminent lawyer, and Mr. Joseph Burnett, merchant, both of Boston.*]

"I have gone somewhat into detail, that you may see the nature of Dr. Morton's embarrassments. They have grown out of his efforts in a cause which has resulted in a great public good, and he deserves a better fate than to be left to sink under them.

"Yours truly,

"BENJAMIN F. BROOKS."

"And am satisfied that he has been a loser of several thousand dollars, directly or indirectly, in consequence of his labors devoted to this object.

"JOSEPH BURNETT."

I do not know what the practice of the Government has been in regard to rewarding individuals for inventions or discoveries made by them,* or, at least, compensating them for the use of them in the public service, [see page 81 and 89,] but I do not hesitate to say that if it has been the practice of Congress to grant such rewards or compensation, Dr. Morton's claim is fairly entitled to the most liberal consideration.

Very respectfully, your obedient servant,

C. M. CONRAD,
Secretary of War.

Hon. FREDERICK P. STANTON,
Chairman Committee on Naval Affairs, House of Reps.

** List of Patents purchased and used in the Army of the United States.*

Thomas Blanchard.—For the use of several machines for turning or cutting irregular forms, constituting in the whole what is generally known as the Gun-stock turning Machine, with the several improvements for the use of, and in connection with this invention, there has been paid to Mr. Blanchard by this Department, for the privilege of using the same, \$18,921 50.

J. H. Hall.—For the right to make and use patent breech loading rifle and carbine, and all the machinery for making the same, there has been paid to Mr. Hall and his heirs, the sum of \$37,553 32.

Dr. E. Maynard, March 20, 1845.—For the right to make and use his improved lock and percussion priming for small arms, and to apply the same to 4,000 muskets, there has been paid to Dr. Maynard, \$4,000.

The right to use the invention and apply the same to a greater number of arms at a reduced scale of prices has been secured, and may be used if desirable, as follows, viz: For 10,000 muskets, \$7,500; for 20,000 muskets, \$10,000; for 100,000 muskets, \$25,000; any greater number at a price to be agreed upon, not exceeding 25 cents for each musket.

J. B. Hyde, Dec. 1846.—For the right to make and use Hales's patented war rocket to an unlimited extent for the military service, \$10,000.

S. Mower and W. H. Scoville, attorneys of P. W. Gates, Sept. 5, 1848.—For the right to make and use in all establishments of the Ordnance Department Gates' patent dies for cutting screws, \$750.

Loug's Bridge Patent.—For the Bridge Patent privilege there has been paid \$850 00.

Mitchell's Screw Pile—For Sand Key Lighthouse, \$1,700 00.

Mitchell's Screw Pile—For Brandywine Lighthouse and Ice-breaker, \$2,400 00.

Boettcher's Fuze.

Stevens's Shell.

List of Patents purchased and used in the Navy of the United States.

Stevens' "Cut-off."—For right to use two on Mississippi or other steamer during continuance of patent, \$2,500; for right to use on Saranac, \$2,700.—Total, \$5,200.

Sickell and Cook's "Cut-off."—For right to use on Michigan, \$3,000; on Water Witch, \$750; on Gen. Taylor, \$500; on Powhatan, \$6,681 25; on San Jacinto, \$4,418; on Fulton, \$1,780 98; on Princeton, \$2,700; on Alleghany, \$3,927.—Total, \$23,757 23.

George W. Taylor's "Marine Camels."—For one set for first class sloop-of-war, with right to use said camels during continuance of patent, \$27,500.—Total, \$27,500

West and Thompson's "Clasp Coupling."—For right to use on Susquehanna, Saranac, San Jacinto, and Powhatan, \$1 20 per inch diameter of attached vessel.

Worthington and Baker's "Steam Pump."—For one for San Jacinto, \$500; two for Powhatan at \$500, \$1,000; two for Princeton at \$600, \$1,200; two for Alleghany at \$600, \$1,200; one for Water Witch, \$400; one for Vixen, \$400; one for Fulton, \$500; two for Mississippi, \$1,100; two for Saranac, \$1,000; two for Susquehanna, \$1,000; article manufactured and patent included in each case.—Total, \$8,300.

Worthington and Baker's "Percussion Water Gauge."—For three for Princeton at \$80, \$240; three for Alleghany at \$80, \$240; four for Powhatan at \$60, \$240; four for Mississippi at \$60, \$240; one for Water Witch, \$60; one for Vixen, \$60; two for Fulton at \$60, \$120; three for Saranac at \$60, \$180; article manufactured and patent included in each case.—Total, \$1,380.

Copeland's "Self Acting Blow."—For right to use and make for Fulton, San Jacinto, and Powhatan, \$1,270; for Vixen, \$144; for Saranac, \$480.—Total, \$1,894.

Seewell's "Salinometers"—For seven for Alleghany at \$75, \$525; seven for Princeton at \$75, \$525; four for Susquehanna at \$75, \$300; four for Powhatan at \$75, \$300; three for Saranac at \$75, \$225; four for Fulton at \$75, \$300; one for Water Witch, \$75; one for Vixen,

NAVY DEPARTMENT, BUREAU OF MEDICINE AND SURGERY,

June 29, 1852.

SIR: I have had the honor to receive your letter of yesterday's date, in relation to the memorial of Dr. W. T. G. Morton, asking of Congress remuneration for the discovery of the anæsthetic properties of sulphuric ether, and calling upon me for a statement as to the basis on which the claim is founded, with an estimate of the amount to which, in my opinion, he is entitled, on the score of the benefits and advantages resulting from its use in the naval service.

As the views of the Bureau in regard to the importance of this discovery have been already expressed in a communication to Dr. Morton, I beg leave to extract so much of it as relates to this branch of the subject.

"In reply to your inquiry as to the importance attached to the late discovery of etherization, by the Medical Corps of the Navy, it gives me pleasure to express the high sense they entertain of its utility, not only in surgical practice, but as a powerful agent in many painful affections which have resisted the ordinary remedies. This opinion is strengthened by the concurrent testimony of the ablest civil practitioners of our own country, with the emphatic endorsement of its value by the best British and continental surgeons.

"The gist of this discovery consists in finding that nervous perception is suspended under the influence of the ethereal inhalation; and while suspended, that the patient is unconscious of pain under the operation of the knife. In addition to the great benefit derived from its use, in alleviating pain, it has a decided effect in diminishing mortality. Its advantage in this respect appears to be in saving the system from the severe shock and nervous exhaustion which attend most of the graver surgical operations, and which of themselves often prove fatal.

"It dispels the fear of pain which formerly prevented many from submitting to an operation, or induced them to defer it until too late.

"It enables the surgeon, also, to operate coolly, and effectually, undisturbed by the cries and struggles of the patient, which sometimes unnerves the steadiest hand, and render abortive the best directed efforts."

In regard to the grounds on which Dr. Morton basis his claim to pecuniary remuneration from the Government, I would state, that from the peculiar nature of the discovery, it is impossible to protect the inventor in the exclusive advantage of it by letters patent. The novelty

\$75; four for Mississippi at \$75, \$300; three for San Jacinto at \$75, \$225; article manufactured and patent included in each case.—Total, \$2,850.

Allen and Noyes' "Metallic Packing."—For right to use on Powhatan, Mississippi, and Michigan, \$3,400; on Saranac, \$1,250; on Princeton, \$900; on Alleghany, \$900; on Water Witch, \$700; on Vixen, \$700.—Total, \$7,850.

Pirsson's "Condenser."—For right to use on Alleghany, inclusive of his personal attendance while manufacturing, \$1,000.—Total, \$1,000.

Lamb and Summer's "Sheet-plate Boiler."—For right to make and use on Princeton and Alleghany, \$5,085; on Water Witch and Vixen, \$1,800.—Total, \$6,885.

B. Crawford's "Steam Thermometer."—For one to be used at the Foundry Washington Navy Yard, inclusive of patent, \$100.—Total, \$100.

Lt. Hunter's "Submerged Wheel."—For right to use on Alleghany, (not now used,) \$10,320. Total, \$10,320.

Francis' "Life Boat."—For one for Mississippi, \$520; one for Vandalia, \$520; one for Vincennes, \$520; one for Saranac, \$540; one for Alleghany, \$540; one for Copper Cutter, \$540; one Dingy for Washington Yard, \$50; one Dingy, \$126; one Dingy for Alleghany, \$126; one Copper Cutter, \$540; manufactured article and patent included in each case.—Total, \$4,022.

of the discovery consists in the new application of an old remedial agent, and the privilege of using it, on the part of the profession at large, cannot be practically curtailed by statutory enactment. The inventor is thus deprived of the pecuniary advantages of his discovery, and is justified in appealing to the Government, which also largely avails itself of the benefits derived from it, for relief.

It will be difficult to estimate the amount which the inventor may reasonably ask of the Government in consideration of the advantages attending its use in the two services. For the reasons above mentioned, the cost of the ether itself cannot enter as an element into the calculation, and the fairest estimate, I conceive, might be more nearly approximated by the amount one would be willing to give to be rescued from impending death, or to be relieved from urgent and intolerable pain.

I would express the opinion, however, that the sum of *one hundred thousand dollars* proposed by the Select Committee of the House of Representatives as a compensation to the inventor, is nothing more than a fair equivalent for the immense advantage resulting to the Government and country from this important discovery.

I am, very respectfully, your obedient servant,

THOS. HARRIS,

Chief Bureau of Medicine and Surgery.

HON. WM. A. GRAHAM, *Secretary of the Navy.*

HOUSE OF REPRESENTATIVES, *August 9, 1852.*

SIR: I have the honor to transmit, for your perusal, a printed copy of a Report agreed upon by the Select Committee of the House of Representatives, to whom was referred the memorial of Doctor Wm. T. G. Morton, asking remuneration from Congress for the discovery of the anæsthetic properties of sulphuric ether, from which you will perceive that the Committee have determined to report a bill appropriating the sum of \$100,000 to Doctor Morton, as a compensation for his discovery, and in consideration of the surrender to the United States of all right and interest which he now holds in that discovery in virtue of letters patent granted to him by this government.

There is every disposition on the part of the House to favor this bill, and its many friends are sanguine of its passing by a large vote if it can be reached. It is feared, however, from the recent ruling of the House, which makes it out of order to append amendments to the regular appropriation bills, which are not made to carry out previously existing laws, will present an effectual barrier to its being brought up in that manner, and the late period of the session precludes the hope that it can be reached in the ordinary course of business.

The object of this communication, therefore, is, to urge upon your consideration, the practicability and propriety of attaching the bill above referred to, to the "army appropriation bill" for the present fiscal year, when the same shall come under consideration in the Committee on Military Affairs of the Senate.

Very respectfully, your obedient servant,

WM. H. BISSELL.

HON. JAMES SHIELDS, *Chairman of Committee on Military Affairs,
United States Senate.*

Upon the receipt of the above letter the subject was thoroughly investigated by the Military Committee, and they came to the following conclusion:

Resolution of the Military Committee.

Resolved, That the Committee on Military Affairs of the Senate report an amendment to the army appropriation bill for the current year, appropriating the sum of one hundred thousand dollars to enable the President of the United States to procure the surrender of the patent issued to Dr. William T. G. Morton, for his discovery of the anæsthetic properties of sulphuric ether.—*See the speeches in Appendix of Dr. Borland and Gen. Shields, members of said Committee.*

The subject being then taken under consideration by the Committee on Naval Affairs, the following resolution was adopted by that Committee:

Resolution of the Naval Committee.

Resolved by the Senate Committee on Naval Affairs, That the said Committee fully concur with the Committee on Military Affairs in reporting an amendment to the army appropriation bill, appropriating one hundred thousand dollars to enable the President to procure the surrender of the patent issued to Doctor Wm. T. G. Morton, for his discovery of the anæsthetic properties of sulphuric ether.—*See the speeches in Appendix of Dr. Gwin, Mr. Badger, and Mr. Mallory, members of said Committee.*

In pursuance of the above resolutions, Dr. Borland, a member of the Committee on Military Affairs; moved the following amendment to the army appropriation bill, to come in after 122d line:

Amendment to the Army Appropriation Bill.

To enable the President of the United States to procure the surrender of the patent issued to William T. G. Morton on the 12th day of November, 1846, for his discovery of the anæsthetic properties of sulphuric ether, *one hundred thousand dollars.*

Yeas—17. Nays—26.

APPENDIX B.

[*Extract of a letter from John Watson, M. D.*]

NEW YORK HOSPITAL, *January 10, 1852.*

The wonderful action of ether and the other anæsthetics in alleviating suffering, and in overcoming spasm and muscular resistance during the most protracted, difficult, and delicate surgical embulations, is sufficient to place them among the most useful discoveries that ever have been effected, *and to entitle Mr. Morton, who first demonstrated the anæsthetic properties and use of sulphuric ether, to the gratitude of his countrymen, and to give him rank among the benefactors of the human race.*

I remain, with becoming respect,
GEORGE NEWBOLD, Esq.

JNO. WATSON.

WEST POINT, NEW YORK, *February 14, 1852.*

Both ether and chloroform are used as æsthetic agents in the army.

I am, sir, very respectfully, your obedient servant,

JNO. W. CUYLER.

Hon. W. H. BISSELL, *Chairman, &c.*

Surgeon U. S. A.

ST. LOUIS, MO., *February 12, 1852.*

Ether was first used by the army early in 1847, during the Mexican war, more particularly on General Scott's line; as at that period a complicated and fragile inhalator was employed for its use, of the number of instruments sent to the army, two, intended for the Rio Grande line, were broken in the transportation; hence the ether was little used if at all on that line. The chloroform was early introduced in the army, not soon enough to have had experience of it or chloric ether during the war. It is now one of the principal articles of our medical supplies, and is in general use.

The chloroform is as highly esteemed by the medical officers of the army and navy as by the surgeons in general practice; it is certainly an inestimable boon to suffering humanity. To my knowledge no important surgical operation, including reduction of dislocations, fractures, &c. is performed in the army without its being employed.

I have the honor to be, very respectfully, your obedient servant,

E. H. ABADIE,

Asst. Surgeon, U. S. A.

Hon. W. H. BISSELL, *Chairman, &c.*

FORT ADAMS, R. I., *February 10, 1852.*

I have no doubt their effect is greatly to lessen mortality in surgical operations.

Most respectfully, your obedient servant,

R. S. SATTERLEE,

Hon. W. H. BISSELL, *Chairman, &c.*

Surgeon U. S. A.

“WEST POINT, N. Y., *February 12, 1852.*”

Says it was introduced into the Mexican war. “I shall consider it the greatest boon of the soldier.

“J. SIMONS,

“Asst. Surg. U. S. Army.”

“ATHENS, GEORGIA, *February 9, 1852.*

“I reply, that in the Navy of the United States, to my knowledge, both ether and chloroform are used as anæsthetic agents.

“That the discovery is of American origin and due to Dr. Morton, seems so well established and believed, that it is needless for me to add anything on this head. The memory of such a man should be written ‘*in ærea perenes* ;’ and it would reflect honor upon his country to reward his labors while living. Such a man can proudly exclaim with the immortal Tycho Broke, ‘I have not lived in vain.’

“A. A. FRANKLIN HILL,

“Asst. Surg. U. S. Army.”

“NEW YORK, *January 3, 1852.*

“I would state that sulphuric ether and tincture of chloroform are among the medical supplies furnished for the use of the army.

“T. G. MOWER,

“Surg. U. S. Army.”

“NEW YORK, *January 31, 1852.*

“Chloroform and sulphuric ether are, I believe, furnished generally to the army. * * * The effect of these agents is wonderful and most valuable in lessening pain and suffering.

“ROBERT MURRAY,

“Asst. Surg. U. S. Army.”

“PHILADELPHIA, *January 27, 1852.*

“And so far as my observation extends, (having witnessed a large number of most painful operations under the influence of ether,) I can but consider the discovery of the properties of these agents, as the greatest boon that poor suffering humanity has ever received.

“W. WHEATON,

“Surgeon U. S. Army.”

"FORT WASHINGTON, INDIANA, *January 27, 1852.*

"Medical officers are supplied with Chloroform for the use of the army. * * * I have used it myself.

"LEWIS A. EDWARDS,
"Surgeon U. S. Army."

"GERMANTOWN, *January 26, 1852.*

"Some of these agents are always added to the requisitions of medical surgeons.

O. J. WESTER,
"Asst. Surgeon U. S. Army."

"FORT MOULTRIE, CHARLESTON HARBOR, S. C., *February 19, 1852.*

"Sulphuric ether was used in the General Hospital at Vera Cruz, Mexico, in the summer of 1847, I had charge of that hospital.

"J. B. PORTER, M. D.,
"Surgeon U. S. Army."

"PLATTSBURGH BARRACKS, N. Y.

"I have used ether, as before stated, for many years.

"J. MAKLIN,
"Asst. Surg. U. S. Army."

JEFFERSON BARRACKS, MO.

C. A. Finley, Surgeon U. S. Army, uses it and says: "As an alleviator of human suffering, I consider it the most important discovery that has been made since the days of Jenner."

FORT MEADE, FLORIDA.

Jona. Letturman, assistant surgeon U. S. army, says he uses them in "diseases involving the nervous system—in allaying the vomiting of an irritable stomach—in cramp colic—and in delirium tremens. Its administration in all was followed by complete relief. In a case of delirium tremens, in which all the ordinary remedies were used without effect, I attribute the saving the patient's life to the administration of chloroform."

FORT SCOTT, MISSOURI.

Jos. K. Barnes, assistant surgeon U. S. army, says, "both ether and chloroform have been, and continue to be, used as anæsthetic agents by myself and others in army practice. The use of chloroform, under my immediate notice, has been confined to its anæsthetic effects during surgical operations of some magnitude, in which freedom from pain on the part of the patient was considered conducive to safety and celerity in operating. No medical officer is likely to be without them."

FORT DODGE, IOWA.

Charles C. Keeney, assistant surgeon U. S. army, says "ether and ehloroform are both used as anæsthetic agents in the army. They are used to a great extent in neuralgie diseases, and in amputations of the extremities, and extirpation of various tumors—all with remarkable good effect in annulling sensation and voluntary motion. Where I have been stationed they have been used to a great extent."

FORT RIPLEY, MINNESOTA TERRITORY.

J. Frazier Head, asst. surgeon U. S. army, uses them, and says, "as in many important operations in surgery the nervous shock, resulting from the pain experienced, is an element of great importance in determining the issue of the case, an agent which removes this element with comparative safety, and no bad influence to counterbalance this advantage, cannot fail to diminish the mortality attendant upon such operations."

U. S. NAVAL HOSPITAL, PORTSMOUTH, VA.

N. C. Barrabino, surgeon, U. S. navy, says ether and ehloroform is used both in the army and navy, and is decidedly of the opinion that their use lessens mortality.

FORT MCINTOSH, LOREDO, TEXAS.

G. Pierce, assistant surgeon U. S. army, uses them, and says, "I am inclined to form a very high opinion of ehloroform as a remedial agent."

FORT WEBSTER, NEW MEXICO, *May 27, 1852.*

SIR: It gives me pleasure, in compliance with your request, to enclose to you the aecompanying table. My experience in the larger amputations is, you will perceive, small, but favorable in the highest degree to the good effects of etherization. Wishing you success,

I am, very respectfully, your obedient servant,

WILLIAM A. HAMMOND,

Asst. Surgeon U. S. A.

Dr. W. T. G. MORTON, *Washington, D. C.*

"FORT DUNCAN, TEXAS.

"All my experience regarding anæsthetic agents has been in parturition, and I can assure you that the effect has always exceeded my most sanguine hopes.

"GEO. E. COOPER,

"Asst. Surgeon U. S. A."

BALTIMORE, *February 2, 1852.*

That the discovery of an agent which assuages or annihilates the severe pain *often* experienced in diseases, *necessarily* inflicted to a greater or less degree, in operations on the human body, and, *generally*, incident to the condition of the female in the act parturition should, at the very first blush, commend itself to the acceptance of all mankind; and that the discoverer of such an agent should be regarded as having conferred the highest earthly boon on afflicted humanity; are propositions too obvious to need the slightest argument to enforce them.

Whether ether or chloroform is used in the army for anæsthetic purposes I have no means of knowing, but it is certainly so used in the practice of the Navy.

I am, sir, respectfully, your obedient servant,

J. BEALE, *M. D.*

To Hon. W. H. BISSELL, *Chairman, &c.*

Surgeon U. S. N.

NAVAL RENDEZVOUS, NEW YORK, *February 7, 1852.*

By most of the medical profession these agents are highly appreciated, and it is believed that Mr. Morton, who made public his discovery of the anæsthetic power of ether, is deserving a public reward.

I have the honor to be, very respectfully, your obedient servant,

D. S. EDWARDS.

Hon. W. H. BISSELL, *Chairman, &c.*

Surgeon, U. S. N.

"ERIE, PENN., *January 30, 1852*

"I should hold myself bound to use sometimes the one, sometimes the other, in various conditions of disease and injury.

"WM. MAXWELL WOOD,

"Surgeon U. S. Navy."

"NORFOLK, *February, 4, 1852.*

"Chloroform or sulphuric ether are used in the naval service as an anæsthetic agent.

"They are principally used, in the naval service, to lessen pain, and enable a timid or excitable patient to undergo an operation.

"JAMES CORNICK,

"Surgeon U. S. Navy."

"PHILADELPHIA.

"That they are used in the army and navy. I think they diminish mortality.

"DANIEL EGBERT,

"Surgeon U. S. Navy."

"PHILADELPHIA.

"I have used chloroform as an anæsthetic agent in my practice in the Navy.

"J. HOPKINSON, *U. S. N.*"

“U. S. SHIP PENNSYLVANIA, NORFOLK, VA.

D. B. Phillips, Assistant Surgeon U. S. Navy, uses them, and speaks of them in the highest terms.

“ANNAPOLIS, MD.

“My experience has been as yet, limited to some sixteen surgical cases. In preventing the sufferings of surgical operations, I consider ehloric ether entitled to rank as the crowning medical discovery of the day. The eascs in which I used it, were for the removal of cancerous breasts and large tumors, situated in delicate parts. I should strenuously recommend its introduction on board of our vessels of war.

“NINIAN PINKNEY,

“*Surgeon U. S. Navy.*”

“U. S. NAVAL HOSPITAL, CHELSEA.

“They are both used as anæsthetic agent in the navy.

“S. RUDENSTEIN,

“*U. S. Navy.*”

“U. S. SHIP PENNSYLVANIA, NORFOLK, VA.

“Chloroform is used in the navy. Its use has been confined to amputations and other painful and protracted surgical operations, and with decided benefit.

“D. B. PHILLIPS,

“*Asst. Surgeon U. S. Navy.*”

“PHILADELPHIA.

“Ether and ehloroform are both employed as anæsthetic agents in the U. S. Navy. Diminish mortality in a very notable proportion.

“JOHN O’CONNOR BARCLAY,

“*P. A. Surgeon U. S. Navy.*”

“U. S. NAVY YARD, GOSPORT, VA.

“Samuel Barrington, Surgeon U. S. N. says they are used in the army and navy.”

“U. S. STEAM FRIGATE SAN JACINTO, GOSPORT, VA.

“I have witnessed the use of ether and chloroform as anæsthetic agents in the navy. These agents have been very generally employed in a great variety of cases, and with favorable effect.

“JOHN H. WRIGHT,

“*Passed Ass’t Surgeon, U. S. Navy.*”

"U. S. NAVAL RENDEZVOUS, BOSTON, *January 30, 1852.*

"I have seen chloroform used in the Navy. * * * I would use it in all surgical operations when it was desirable to prevent pain.

"GEO. MALTSBY, *U. S. N.*"

"U. S. MARINE HOSPITAL, ST. LOUIS.

"My impression is, that they are used in the army and navy to a considerable extent, my impression being derived from an acquaintance with many of the medical staff of those branches of the public service, from their publications in the medical journals of the country, and from their known disposition to keep pace with the progress of science. They are regarded as one of the greatest gifts that science could lay on the altar of humanity. They have now been used on perhaps millions of persons, indiscriminately, in both hemispheres.

"CHAS. A. POPE, *U. S. N.*"

"U. S. MARINE HOSPITAL, NEW ORLEANS, *Feb. 17, 1852.*

"As regards the use of anæsthetic agents, we have invariably employed chloroform in operations; also for perineal section, for stricture of the urethra, and minor surgery, without any unpleasant results, and I think with more favorable convalescence.

"P. B. McKELVEY,
"Principal Physician and Surgeon."

Dr. J. H. Hopkinson, U. S. navy, uses chloroform.

Wm. Lowber, U. S. navy, says ether and chloroform is used.

John H. Wright, passed assistant surgeon U. S. navy, uses them.

D. B. Phillips, assistant surgeon U. S. navy, has used them.

John L. Fox, surgeon U. S. Naval Hospital, Chelsea, says he has used them.

John L. Burt, U. S. N., U. S. Naval Hospital, N. Y., uses chloroform.

Geo. Blacknall, surg. U. S. N., Norfolk, Va., says they are used.

Wm. A. Nelson, M. D., U. S. navy, says it is used in the navy.

D. S. Edwards, surgeon U. S. navy, says ether and chloroform are used in the navy.

Charles S. Tripler, surgeon U. S. A., Fort Gratiot, Mich., uses them.

R. O. Wood, surgeon U. S. A., says it has been used in the army.

A. S. Wotherspoon, assistant surgeon U. S. army—Surgeon General's Office—bears testimony to its high value.

Josiah Simpson, assistant surgeon U. S. army, Fort Wood, New York Harbor, uses ether.

Dr. Macklin, assistant surgeon, U. S. army, uses ether.

L. D. Williams, Havre de Graee, says ænæsthetic agents are used.

Ebenezer Swift, surgeon U. S., Fort Martin Scott, Texas, uses anæsthetic agents.

Dr. J. N. Schoolfield, Marine Hospital, Norfolk, Va., uses anæsthetic agents.

Dr. Henry S. Leveret, U. S. Marine Hospital, Mobile, uses anæsthetic agents.

Dr. William Ingalls, U. S. Marine Hospital, Chelsea, Massachusetts, uses anæsthetic agents.

Dr. M. L. Hewitt, U. S. Marine Hospital, Cleaveland, Ohio, uses them.

Alexander H. Hassier, Texas, assistant surgeon U. S. army, uses anæsthetic agents.

Thomas H. Williams, assistant surgeon U. S. army, Fort North, Texas, speaks highly of them.

T. C. Madison, U. S. army, uses anæsthetic agents.

[*Extract of a letter from Henry J. Bowditch, Physician of the Massachusetts General Hospital.*]

Boston, January 4, 1852.

I presume that the discovery of the anæsthetic properties of ether, and *its practical application to medicine*, will take a rank quite equal to that of vaccination. To no one does the world owe so much for this practical application, as to Dr. Morton. In fact I am fully convinced that had it not been for the boldness of that gentleman, the *world* to the present hour would have been ignorant of these peculiar adaptations of ether to alleviate human suffering. I say boldness *now*. In former times, however, I said *rashness*; for I believe I may say, without fear of contradiction, that the medical profession, as a body, would have feared death as the result, from experiments such as are now made daily without the least fear. Dr. Morton has convinced us from error. Doubtless he received suggestions from other similar experiments, made by several individuals, but to his indomitable perseverance do we *finally* owe all the essential good which the discoverer has bestowed on man.

I hope therefore that Dr. Morton will receive a tribute of respect from Congress, that shall be commensurate with the great benefits that he has bestowed upon the nation.

I remain, very respectfully, yours,
Hon. W. H. BISSELL.

HENRY. I. BOWDITCH.

[*Extract of a letter from Henry J. Bigelow, Professor in Harvard University, and Surgeon in Massachusetts General Hospital.*]

Boston, January 3, 1852.

I trust that Dr. Morton will now at last receive a substantial and liberal return for his discovery, that ether can annul pain; 1. with safety—with less risk, for example, than everybody daily encounters either in walking or riding; 2. with certainty, in every case.

I have the honor to be, respectfully, your obt. servant,

HENRY J. BIGELOW.

W. H. BISSELL, *Chairman, &c.*

[*Extract of a letter from James Jackson, M. D., Professor Emeritus of Theory and Practice of Physic in the University at Cambridge, Honorary Member of the Royal Medico-Chirurgical Society of London, &c.*]

Boston, January 5, 1852.

I have, nevertheless, watched the new use of ether and chloroform with great interest from the first annunciation of *this discovery by Dr. Morton*; and I will say, in general, that it would be difficult to exaggerate the benefits of these anæsthetic agents.

The great and undoubted benefits of ether are shown in surgical and obstetric practice; and I believe these are such as to entitle the discoverer of its good effects, when employed by inhalation, to a very large reward.

I am, sir, very respectfully, your obedient servant,

JAMES JACKSON.

Hon. W. H. BISSELL.

In a communication to the former committee of the House, Dr. Jackson says:

“In my opinion Dr. Morton is entitled to a grant from Congress, for the Ether discovery, more than any and all other persons in the world.”

[*Extract of a letter from Richard Girdler, M. D.*]

Boston, January 27, 1852.

I was present at those operations when ether was first administered at the hospital; saw its effects with admiration and astonishment, and am witness to its successful application almost every day; and hope the committee will report favorably upon the just claims of Wm. T. G.

Morton, who I believe is entitled to the merit of the discovery, and consequently should receive a fitting reward.

Very respectfully, sir, your obedient servant,

RICHARD GIRDLER,

Superintendent Massachusetts General Hospital.

Hon. W. H. BISSELL.

[Extract of a letter from George Hayward, M. D., Professor of Harvard University, and Surgeon in Massachusetts General Hospital.]

Boston, January 8, 1852.

I cannot close this letter without saying, that I regard sulphuric ether, the agent first used by Dr. Morton, as by far the best anæsthetic agent, that I believe the world are indebted to him for its introduction into practice by proving by actual experiment what was not before known or generally believed, that it could be inhaled with safety.

I certainly regard this discovery as one of the greatest of the age, and think that Dr. Morton is entitled to a liberal grant from our country for the benefit that he has conferred on the human race.

I am, with much respect, your obedient servant.

GEO. HAYWARD.

Hon. W. H. BISSELL.

[Extract of a letter from Thomas P. Jackson.]

Boston, February 4, 1852.

I consider the discovery and introduction of sulphuric ether as an anæsthetic agent to be second to no discovery in medical science, not even to the discovery of vaccination, and that we are solely indebted for its introduction by Doct. Wm. T. G. Morton.

My opinion is that no compensation Congress can confer on Dr. Morton will equal his deserts, and I really hope that for once a deserving man may receive his recompense during his life, instead of having a monument erected over his grave. I would say, in conclusion, that I have not the slightest acquaintance with Doct. Morton, and that I believe it is the general wish of the profession in this vicinity that Doct. Morton shall receive some remuneration for the benefits he has conferred on suffering humanity.

Yours respectfully,

THOS. P. JACKSON, M. D.

Hon. Wm. H. BISSELL.

[Extract of a letter from Dr. Putnam.]

Boston, February 14, 1852.

In regard to the estimate in which I hold it, (ether,) I cannot perhaps give a more satisfactory proof, than by stating that, immediately after my first experiments, I insisted on Dr. Morton's acceptance of a small

sum of money in acknowledgment of my personal obligation to him, and as an earnest of what I considered to be his due from the whole community.

With great respect, I am yours,

To the COMMITTEE.

CHAS. G. PUTNAM, *M. D.*

[*Extract of a letter from Augustus A. Gould, M. D.*]

Boston, January 15, 1852.

I cannot but hope that Congress will do something noble in this case. Other nations have already bestowed honors and emoluments upon those they have deemed entitled in testimonial of their appreciation of this, the greatest boon which has yet been granted to the keenest sufferings of mankind. And it is not seemly that our own nation should pass by in silence one of the greatest and most universally applicable discoveries which the world can boast of. The person or persons instrumental in bestowing it deserve substantial reward.

I have happened to know every step in the early introduction of the use of ether as an anæsthetic agent. And I am familiar with the odium, the denunciations, and the persecutions, and threatened persecutions which were so liberally showered at its introduction. They came from honest men, whose experience had led them to apprehend serious danger. But with firmness of purpose, disregard of threats, and no lack or stint of expense, the demonstration was soon complete, and all rational opposition has long since been silent; and now it is not only a subject for national pride and national gratitude, but it commands and receives the gratitude of the world.

Very respectfully, your obedient servant,

Hon. W. H. BISSELL.

AUGUSTUS A. GOULD.

[*Extract of a letter from Albion S. Dudley, M. D.*]

Boston, February 3, 1852.

Dr. Morton certainly was the first in this city to *reveal* the anæsthetic effects of the sulphuric ether to the *public*, and successfully introduce it into the Massachusetts Medical College, *to my certain knowledge*.

I have the honor to be, yours respectfully,

To the Hon. W. H. BISSELL.

ALBION S. DUDLEY.

[*Extract of a letter from A. L. Peirson, M. D.*]

SALEM, January 17, 1852.

I have toiled through five and thirty years of medical, and especially surgical practice, in a dense population, during most of the time in conscious need of some pain-destroying remedy, and I hail the discovery of the application of the properties of ether with devout gratitude to a beneficent Creator, who has vouchsafed such a blessing to suffering humanity; and with sincere thankfulness to Dr. Morton as being the efficient

and fortunate agent, by whose means it has been placed in the hands of the medical profession. For although the inhalation of ether, to produce intoxication, may not have been a new idea previous to October, 1846, yet Dr. Morton, at that time, partially demonstrated its safety, utility, and applicability, in making surgical operations painless, and was the procuring cause of its being now employed by all classes of medical practitioners, in taking away that dread of human nature—pain.

I have the honor to subscribe myself, very respectfully,

Hon. W. H. BISSELL.

A. L. PEIRSON.

[*Letter from J. F. May, Professor of Surgery National Medical College, Washington.*]

WASHINGTON, February 10, 1852.

SIR: I have received your circular requesting of me an answer to the following inquiries:

1st. Is ether or chloroform used as an anæsthetic agent in your Institution?

2d. If used, to what extent, in what classes of diseases, or of operations, and with what effect?

3d. What, in your opinion, is their effect in diminishing mortality?

4th. To what extent, in what classes of cases, and with what result are they used in private practice in your vicinity?

5th. In what appreciation are they held by the medical faculty within your knowledge?

I reply:

1st. Chloric ether is always used by me and my colleagues, as an anæsthetic agent in every operation of any importance, that is performed in the Washington Infirmary, of which institution I am one of the surgeons.

2d. For more than three years I have constantly used it, both in hospital and in private practice, and it has never in a single instance, disappointed me in producing insensibility to pain, and I have never found its administration to be attended or followed by any serious result. I have given it at all ages, from the tender infant to the old and infirm man, and from a few moments to more than an hour at a time. I have performed under its influence many of the most important and capital operations of surgery; among which I may mention lithotomy, strangulated hernia, the removal of tumors from various regions, the different amputations of both the upper and lower extremities, from the removal of a finger to disarticulation of the hip joint, &c.

3d. I am perfectly convinced that the use of anæsthetic agents has greatly diminished the mortality of surgical operations, and I am prepared to say further, that I would almost as soon think of amputating a limb without previously compressing its principal artery, as to perform a difficult and dangerous operation without first putting the patient in an anæsthetic state. I consider it, in fact, so important an element to the success of the surgeon in severe and formidable operations, by preventing all shock to the system, that I think he ought to decline any operation of magnitude and danger, should he meet with a refusal on the part of the patient to be subjected to its influence. But fortunately

there are few who are not only willing, but anxious to be soothed by the magic spell which, to the victim, robs surgery of nearly all its terrors, and to the surgeon brings pleasure, from the knowledge that he inflicts no pain.

4th. I believe that all important surgical operations in private practice in this vicinity, are performed under anæsthetic influence, and with the results that I have already mentioned.

5th. I believe that the medical faculty throughout the civilized world, where anæsthesia has been introduced, consider it to be one of the greatest boons that has ever been given to suffering man; and believing Dr. Morton to be its discoverer, I trust he will receive from the Government a compensation commensurate with the immense benefit it has conferred upon the human race.

I have the honor to be, very respectfully, &c.,

Hon. W. H. BISSELL.

JNO. FRED'K MAY.

[*Extract of a letter from Alex. H. Stevens, M. D.*]

NEW YORK, January 5, 1852.

Without the slightest knowledge of Dr. Morton, or of any one connected, or claiming to be connected with this discovery, and without assuming that he is mainly the discoverer, *which yet I believe*, I take leave to state that the claims of scientific discoverers to reward is a strong one.

The community is taxed by patent rights for inventions to the amount of many millions annually. The men of science paying themselves a part of these taxes, and bringing to light, by their unpaid labors, scientific discoveries from which these inventions in a great measure take their rise, are left entirely, in this country, without any reward whatsoever. In Europe they are rewarded, besides that they are supported by salaries attached to their membership of scientific institutions.

In view of these considerations, and looking not only to what is just as between science and government, but what is, in a very high degree and altogether beyond the appreciation of unlearned men, expedient, as respects the interest of the government, liberal rewards should be given for unpatented discoveries.

With very great respect, I am, very truly, your obedient servant,

The Hon. W. H. BISSELL.

ALEX. H. STEEVENS.

P. S. From an official connection with the three great hospitals in this city, embracing about 3,000 patients, I am enabled to state that anæsthetic agents are generally used in puerperal cases, in painful chronic diseases, in the reduction of fractures and dislocations, and in other capital surgical operations, many of which are rendered more successful, and not a few only practicable by their use. I consider it the greatest discovery in medicine since that of Jenner. It is to the healing art, what steam navigation, electro-magnetism, and railroad travelling, are to commercial and social communications.

A. H. S.

[*Extract of a letter from Hugh H. McGuire, M. D.*]

WINCHESTER, VA.

I regard the discovery of anæsthetic agents the most important discovery made in Surgery for the last century. It is also entirely American, for although attempts have been made for a long time to destroy sensibility to Surgical operations, no approximation was made to it, until it was discovered in Boston, that sulphuric ether would produce total insensibility. Now it has been the practice in all enlightened countries to reward important discoveries in a very liberal manner, I do hope that an American Congress will not fail to follow the example. The use of these agents have become so common and general throughout Europe, that a late distinguished Professor, of Philadelphia, during a visit to Europe, was constantly asked, if it was possible any Surgeons in America could be found opposed to them. I have no hesitation in stating that not only is pain avoided, but many lives saved by their use, for the nervous shock, in consequence of serious operations, not unfrequently ends in death. This is avoided by anæsthesia * * *

It would be just and proper to make him a liberal pension for it. It would not only be an incentive and stimulus to further discoveries in this extensive field of science, but redound to the credit of the Government, here and abroad.

Very truly, your friend.

HUGH H. MCGUIRE.

Hon. CHAS. J. FAULKNER.

Prof. Surgery.

Jacob Bigelow, M. D., President of the Academy of Arts and Sciences, Professor in Harvard University, and Physician to Massachusetts General Hospital, in a letter to Hon. W. H. Bissell, says:

"It is considered by myself, and by the more intelligent part of my medical friends, as the most important medical discovery of the present age."

In an article published in the Medical and Surgical Journal of July 7, 1847, he says:

"In the case of Dr. Jackson, if he did make the discovery in 1842, as asserted, or even later, he stands accountable for the mass of human misery which he has permitted his fellow-creatures to undergo, from the time when he made his discovery, to the time when Dr. Morton made his. In charity, we prefer to believe, that, up to the latter period, he had no definite notion of the real power of ether in surgery, having seen no case of its application in that science."

[*Letter from Professor Simpson, the discoverer of Chloroform.*]

EDINBURGH, November 19, 1847.

MY DEAR SIR: I have much pleasure in offering, for your kind acceptance, the accompanying pamphlet. Since it was published we have had various other operations performed here, equally successful. I have a note from Mr. Liston, telling me also of its perfect success in London. Its rapidity and depth are amazing.

In the Monthly Journal of Medical Science for September, I have a long article on etherization, vindicating your claims over those of Jackson.

Of course, the great thought is that of producing insensibility; and for that the world is, I think, indebted to you.

I read a paper lately to our society, showing that it was recommended by Pliny, &c., in old times.

With very great esteem for you, allow me to subscribe myself,

Yours very faithfully,

J. Y. SIMPSON.

Dr. W. T. G. MORTON.

[Extract of a letter from J. Parkman, M. D., of Boston.]

Life may also be saved from the more ready submission of the patients to necessary operations, since they can be assured that they are painless. And inasmuch as pain and spasm do destroy life, it is fair to presume that agents relieving these must diminish mortality.

In private practice in this city anæsthetic agents are in universal use in all surgical operations, and also in *all the operations of midwifery*. They are in quite general use in all diseases requiring an antidote to pain and spasm, as one of the means to allay them, and some practitioners use them in all cases of child-birth.

I remain, very respectfully,

J. PARKMAN,

One of the Surgeons of the Mass. Gen. Hospital.

Hon W. H. BISSELL.

[Extract of a letter from S. D. Townsend, M. D., of Boston.]

It has been used almost daily for diseases of a spasmodic and painful character, and in all surgical operations, with the effect of relieving pain and annihilating perfectly all suffering in surgical operations. I believe it diminishes mortality, by relieving spasmodic diseases, and preventing the severe shock of surgical operations. In private practice it has been used to the same extent, and in the same classes of cases, and with the same result as occurring in the Massachusetts General Hospital, with the addition of cases of midwifery, in which it prevents the sensation of pain, without retarding delivery.

Very respectfully, your obedient servant,

S. D. TOWNSEND,

One of the Surgeons of the Mass. Gen. Hospital.

[Extract of a letter from S. Mason Warren, M. D., of Boston.]

Sulphuric ether and strong chloric ether, are used at the Massachusetts General Hospital. Chloroform is not used.

The above substances are used in almost every surgical operation, and in many diseases attended with severe pain. I have seen them exhibited in more than two thousand cases, including hospital and private practice, and never with any bad result. By preventing the severe

shock to the system in surgical operations, it is probable that they have an influence in diminishing mortality. In surgical operations in private practice, I have used the chloric and sulphuric ethers, principally the former; also in many obstetric cases, and to relieve suffering in painful diseases, often as a substitute for opium; and I believe them to be used by most other practitioners of Boston and the vicinity, for the same purposes, and with a satisfactory result.

Very respectfully, yours,

S. MASON WARREN,

One of the Surgeons of the Mass. Gen. Hospital.

Hon. W. H. BISSELL.

[Extract of a letter from John Ware, M. D., of Boston.]

Their most important use is in the practice of midwifery. They are employed very generally in severe, protracted, and dangerous cases. My belief is, from my own experience, and from the concurrent testimony of all practitioners with whose opinions I am conversant, that they not only diminish, and sometimes annihilate, the suffering which is attendant on parturition, but that they lessen also the dread of it, which is so strong a feeling in the minds of females; and further, that they render patients less liable to the subsequent ill effects of severe labors, especially those in which the use of instruments are necessary.

I have employed or seen them employed in asthma, in croup, in convulsions of children and adults, in neuralgia, in the spasmodic affections of fever, and in many other cases of a more indefinite character, into the description of which it is not now necessary to your purpose to enter. I have also employed them with signal advantage to alleviate the sufferings which occur toward the close of life, or in the act of death, in patients who have had irremediable diseases.

Their introduction is regarded by all practitioners within my circle of acquaintance, whose opinions I should regard as of value, as the most important discovery in practical medicine and surgery, which has been made since that of vaccination by Dr. Jenner.

I am, very respectfully, your obedient servant,

Hon. W. H. BISSELL.

JOHN WARE.

[Extract of a letter from J. S. Jones, M. D., of Boston.]

In the private practice in my vicinity the use of these anæsthetic agents is quite common in dentistry, in midwifery, and scarcely any operation of surgery is performed without its use. The reduction of dislocations and the adaptation of fractured bones, are materially aided by the effects of ether, besides the freedom from suffering enjoyed by the injured person when under its effects.

Respectfully, yours,

J. S. JONES.

Hon. W. H. BISSELL.

[Extract of a letter from Z. B. Adams, M. D., of Boston.]

It is almost uniformly used, both in public and private practice, in dentistry, in midwifery, and in all surgical operations; also to cause

muscular relaxation in the reduction of hernia; has been eminently successful in cases of convulsions after delivery, and in alleviating the excruciating pain caused by the passage of calculi through the ureters. It is an exceedingly rare thing to hear of any dangerous or even serious effects from the use of either ether or chloroform. The good effects are almost incalculable.

Very respectfully, your obedient servant,
 Hon. W. H. BISSELL. Z. B. ADAMS.

[*Extract from a letter written by Dr. John Jeffries, Physician to the Massachusetts General Hospital.*]

For my opinion of the benefits bestowed upon the world by Dr. Morton, please allow me to refer you to a note addressed by me to the Hon. R. C. Winthrop:

"Dr. Morton, who visits Washington to seek some remuneration from government for the benefit which he has conferred upon the country by the introduction of sulphuric ether, requests me to express to you my opinion (which I do most unreservedly) that the world is indebted entirely to Dr. Morton for the introduction of this agent to produce insensibility to pain, and that it is a physical blessing not second to any that has been conferred upon suffering humanity.

"I sincerely hope that Dr. Morton will receive some remuneration for his very great benefaction.

"With high respect, your obedient servant,
 "Hon. R. C. WINTHROP, JOHN JEFFRIES.
 "*Speaker of the House of Representatives.*"

Oliver W. Holmes, the distinguished Poet, and a Physician to the Massachusetts General Hospital, held the following language in an opening address of the Medical College, Boston:

"The knife is searching for disease,—the pulleys are dragging back dislocated limbs,—nature herself is working out the primal curse, which doomed the tenderest of her creatures to the sharpest of her trials; but the fierce extremity of suffering has been steeped in the waters of forgetfulness, and the deepest furrow in the knotted brow of agony has been smoothed for ever."

Again, in a communication to the Hon. Isaac E. Morse, he says:

"It is a notorious and wholly undisputed fact that Dr. Morton in person instituted the first decisive experiments, at the risk of his reputation, and with a courage and perseverance, without which, even had the idea of the possibility of such effects been entertained, the world might have waited centuries or indefinitely before the result was reached.

"It is well known that Dr. Morton, instead of profiting by his discovery, has suffered in mind, body and estate, in consequence of the time and toil he has consecrated to it.

"I have no particular relations with Dr. Morton, and no interest in common with him to bias me in my opinion and feelings. But, remembering what other countries have done for their public benefactors, and unwilling to believe that a rich and prosperous republic cannot afford

and will not incline to indulge its gratitude whenever a proper occasion presents itself, I have addressed you this line to tell you that I think now is the time and this is the man.

"Hon. ISAAC E. MORSE.

O. W. HOLMES."

[*Extract of a letter from Geo. B. Loring, M. D., Salem, Mass.,*]

It is one month since I had charge of the Marine Hospital, Chelsea, Massachusetts; and any statement based on personal experience, must be founded upon my practice there.

In all operations, in all painful natural processes, in all diseases attended with great local suffering, the intelligent and philanthropic physician avails himself of the great blessing. And while so much suffering is relieved, it cannot be doubted—in fact it is satisfactorily proved that mortality attending these operations, processes, and diseases, is materially diminished.

As the interrogatories addressed to me have grown out of an inquiry into the "claims of Wm. T. G. Morton, of Boston, to the merit of the discovery," it may be proper to state to the committee that its credit has been from the earliest date, almost universally accorded to Dr. Morton by those of the profession who have given it their careful investigation. During its development, the surgeons and officers of the Massachusetts General Hospital, examined its merits, under the special guidance of Dr. Morton, and with a full recognition of his sole agency in the practical experiments which were leading to its establishment. And now that those events have passed into history, the Historiæ of the hospital, records as a fact fixed by all reliable testimony, that Dr. Morton is the discoverer.

It should be borne in mind that this is the verdict of the immediate locality in which the discovery was made; and any recognition from abroad of Dr. Jackson's claims to it is no more than should be expected from the scientific world towards any pertenacious and untiring claimant, holding his high position, be the claims true or false.

Hon. W. H. BISSELL.

GEO. B. LORING.

[*Extract from a letter written by Dr. Francis Boott, of London.*]

"I was much interested in the discussion of the Ether question, and enterely agree with you in your conclusion. I should say, as in the case of the yacht-race, '*Morton is first, and Jackson no where.*' I am glad to find you are making a gallery of portraits of your benefactors and distinguished medical men, and Morton's should be among them. *I still hope Congress will reward him.*"

Hon. W. H. BISSELL.

[*Extract of a letter from S. Paris, M. D., of Greensboro, Alabama.*]

The medical faculty appreciate it highly, and seem at a loss to know how they would practice without it, nor could a man be sustained by his medical brethren or the community, who would refuse to use it. In fine, it is to the medical profession the greatest discovery of modern times, hardly excepting quinine.

Hon. W. H. BISSELL.

Very respectfully,

S. PARIS.

[*Extract of a letter from James Ayer, M. D., of Boston.*]

The cases in which they are more especially employed, are in nearly all surgical operations where suffering is an attendant; in surgical diseases generally painful, and frequently protracted. They are also used in diseases of a spasmodic character, as cholera, cramps, colic, asthma, and in rheumatism and neuralgia. A great variety of cases in midwifery, as well as hysteria and convulsions, and many other painful diseases which might be added to this list, are very essentially relieved by these remedies.

Your obedient servant,

Hon. W. H. BISSELL.

JAMES AYER.

[*Extract of a letter from P. M. Crane, M. D., of East Boston.*]

In nearly all the operations of surgery which are likely to be attended with pain, either chloric ether, sulphuric ether, or chloroform, are used. So uniform is the belief in their utility, that no surgeon at the present time would do without them. In obstetric practice they are also extensively used where cases occur requiring instrumental interference, but are not much employed in natural labor.

With much respect,

Hon. W. H. BISSELL.

P. M. CRANE.

[*Extract of a letter from John H. Dix, M. D., of Boston.*]

In all painful operations upon the globe of the eye and its appendages, these agents afford incalculable relief, both physically and mentally. The severe operations upon the internal textures of the globe of the eye, not in themselves painful, but requiring for their satisfactory performance absolute immobility of the organ, these agents insure what, in young subjects especially, was heretofore only approximated to.

In the few operations of ophthalmic surgery which endanger life, I find from the use of these agents a diminished tendency to inflammatory action within the cranium, and therefore less hazard to life. In aural surgery, though not frequently required, anæsthetic agents are of great value, chiefly in the removal of morbid growths from the external or internal ear. I believe that no other discovery in the whole range of medicine and surgery, (with the exception, perhaps, of vaccination,) has in the same time contributed so much to relieve suffering and prolong life.

Yours, respectfully,

Hon. W. H. BISSELL.

JOHN H. DIX.

[*Extract of a letter from John Appleton, M. D., West Newburg, Mass.*]

I have lately observed good effect follow the inhalation of chloroform during a paroxysm of severe suffering from dysmenorrhea, in which relief was almost instantaneous.

It is, however, in obstetric practice that I have most frequently used these valuable agents, and I regard their usefulness in this relation, as among the most valuable results of their discovery.

Respectfully, yours, &c.,

Hon. W. H. BISSELL.

JOHN APPLETON.

[*Extract of a letter from L. B. Morse, M. D., Boston, Mass.*]

They are used in most cases of important or capital surgery, in many cases of delirium tremens, tetanus, and similar neuralgic diseases, and in dental surgery, also, by some of our medical practitioners in common use in midwifery.

It diminishes mortality in three ways: 1st. In severe surgical operations, by entire relief from nervous excitability and reaction which attend them; 2d. By giving time for the use of the knife, and the careful completion of a dangerous operation, in the perfect quietude of the patient; 3d. The rest secured by some patients in certain neuralgic diseases, which if not attained, death is the result.

I am, sir, your obedient servant,

L. B. MORSE.

HON. W. H. BISSELL.

[*Extract of a letter from L. H. Anderson, M. D., Sumterville, Ala.*]

I think anæsthetics diminish mortality in two ways: 1st. By preventing the shock of pain on the nervous system; 2d. By securing perfect immobility of the patient, and enabling the surgeon to operate more safely and exactly.

I am, very respectfully, your obedient servant,

L. H. ANDERSON, M. D.

HON. W. H. BISSELL.

[*Extract of a letter from S. Blanding, M. D., Columbia, S. C.*]

Its use has induced patients to submit to the knife early; when otherwise they would have resulted fatally.

I consider it one of the most important discoveries of the age in mitigating human suffering, and often in saving life.

I have the honor to be, yours, &c.,

S. BLANDING.

HON. W. H. BISSELL.

[*Extract of a letter from William Ellis, M. D., Oglethorpe, Ga.*]

It is my deliberate opinion, founded upon experience, that their effects in diminishing mortality is more than fifty to one, for, if properly administered, the effect is to take away all fear from the patient, and absolutely free the nervous system from irritation, and thereby prevent any interruption in the various organs in performing their functions naturally and of course healthily.

In private practice its most happy and beneficial effects is in obstetrics, nothing is or can be of so much value to a woman in labor in proportion to the difficulty attending labor; so is its benefits, and if in no other, in this class of cases alone, it is the greatest discovery in any age of the world for the relief of suffering humanity; deprive me of its benefits, and I should almost if not altogether abandon my profession.

HON. W. H. BISSELL.

WILLIAM ELLIS.

DEBATE

IN THE UNITED STATES SENATE,

SATURDAY, AUGUST 28, 1852,

ON THE

ANÆSTHETIC PROPERTIES OF SULPHURIC ETHER.

[FROM THE APPENDIX TO THE CONGRESSIONAL GLOBE.]

The Senate having under consideration the bill making appropriations for the support of the Army for the year ending June 30th, 1853—

Mr. BORLAND, from the Committee on Military Affairs, submitted the following amendment, to come in after the appropriation for the medical and hospital department of the Army:

To enable the President of the United States to procure the surrender of the patent issued to William T. G. Morton on the 12th day of November, 1846, for his discovery of the anæsthetic properties of sulphuric ether, \$100,000.

Mr. BORLAND. Mr. President, if the Senate will give me their attention for a few moments, I think I can put this matter on its true merits. The proposition is to appropriate \$100,000 to enable the President of the United States to purchase from a patentee his patent, or the privilege of using property to which he holds exclusive right under his patent.

The first inquiry that we make is: Is that which we propose to purchase valuable?—and, if it is, what is its value? I will not undertake to go into a detail of facts, or any argument to show the value of the discovery of the application of sulphuric ether as an anæsthetic agent. It is a subject which has been before the public so long, that I apprehend every Senator is familiar with its history, and the character of the discovery. I state what I apprehend no one will controvert—I state as a member of the medical profession, representing, in that respect, I think truly, the universal sentiment of the profession throughout the world—that as a discovery beneficial to the human race, if it be second to any which has ever been given to the world, it is second to vaccination alone. I know that the universal sentiment of the medical profession, so far as that sentiment has been expressed, is, that it is second to vaccination.

Then, sir, for the estimation in which it is held by the officers of our Government, who have availed themselves of its use in the public service, I have before me letters from the Secretary of War, from the Secretary of the Treasury, from the Secretary of the Navy, from the head of the Medical Department of the Navy, and from the head of the Med-

ical Department of the Army—all concurring in assigning to this discovery, as used in the public service, the very highest value; and expressing the wish, that the Government might, by proper means, avail itself of the right to use it in the public service. I will not read these letters. It would occupy too much time of the Senate to do so. But if any Senator should desire their reading, they can be read. All assume, that it is of the very highest value, both to the Army and Navy; that it has been availed of for years past; and that incalculable benefits have resulted to the public, in saving life and allaying human suffering, greater than has ever been derived from any one source. It is a well-known fact, that, in the Army and Navy, in the performance of all important surgical operations, this agent is now very rarely, if ever dispensed with. And not only so, in the Army and Navy—not only is it used in saving life and suffering on the part of our soldiers, and our sailors, but throughout the private practice of the country, the most eminent surgeons and physicians resort to it now habitually, and declare that it has become one of the most important and valuable agents which they have in the profession. If there were time, I could go on for hours in giving the particulars, giving the *modus operandi*, giving the cases by name, and by number, till they would count thousands upon thousands; but there is no time at this period of the session for that.

The next point I would present is, how far it is recommended to our consideration? The Select Committee of the House of Representatives, to whom this matter was referred—although, as the Senator from Connecticut suggests, they did not formally make their report, yet it was only because no opportunity was afforded for them to do so—have prepared a report—it is here before me—a most elaborate, learned, and conclusive report as to the incalculable value of this agent, and the propriety, in the opinion of that committee, of its being availed of by the Government.

Sir, it may be asked if this be so valuable—if this individual has a patent for it, why does he not avail himself of the use of the patent, and pre-

vent the use of sulphuric ether as an anæsthetic agent without recompense to him? I need hardly remind the Senate of the fact, that it is one of those cases in which he cannot enforce his legal rights. How can he, sir? Why, this agent is used in every State and county in this Union; and it may be, and perhaps is, used in almost every family where physicians practice. He has no practical remedy for the violation of his patent. Can he go to the bedside of the sick and suffering patient, who is undergoing an operation under the influence of this agent, and lay an injunction upon its use on such an occasion? Certainly not. It is one of those cases which must strike the mind of every man that his patent, so far as the legal remedy extends, is worthless to him, although he has the legal right, for he holds the patent from the United States to its exclusive use for a certain term of years.

The next question is, Is the individual who holds the patent lawfully entitled, if any one, to be paid for the use of this agent? I say, he is. I have before me here a copy of his patent, and of the record in our Patent Office. The official acts of our officers have recognized and established, as our laws require, the identity of this individual as the lawful owner. It has been stated, I know, and may be repeated, that there is an adverse claimant; that there is another individual who claims to be the discoverer, and who has a title to at least a portion of the compensation which we propose to pay. But to meet that I have to show that if that individual ever had any right to be considered the discoverer, or any title to compensation, it has been relinquished for a consideration in favor of Dr. Morton; for here I have from the Patent Office an official announcement to that effect, which is signed by Dr. Jackson, the only individual that I know of who sets up an adverse claim to this discovery. But there is evidence before us from the very highest medical men in the country, and from the very highest medical officers of the Army and Navy, all recognizing Dr. Morton as the discoverer of this invaluable agent. But even if that were not so, the only other individual who sets up a claim to it has already, in the most solemn form, relinquished it forever, and assigned over to Dr. Morton all right or claim which he (Dr. Jackson) ever did have or could have. So that the point is settled that Dr. Morton stands before us as the patentee lawfully entitled to this discovery as the original discoverer.

In the next place, lest it might occur to the minds of some that purchasing the right from a patentee to use a valuable discovery is a new thing in our Government, I beg leave to call attention to the records, which show that it is no new practice, but for years and years has been repeated over and over again. I will cite a few cases. We paid for the right to make anchors of a certain form for the Navy, \$1,500; for the use of circular bullet moulds, \$5,000; for the use of gas in vapor baths, \$5,000; for elevating and pointing heavy cannon, \$20,000; for the right to use patent anti-attrition metal, \$20,000. We paid to the heirs of Robert Fulton, for benefits conferred by his improvements in steam navigation, \$76,300. We paid for Mix's manger stopper, used in the cavalry service, \$3,000. We paid to Dr. Locke, for the use of his magnetic clock, \$10,000. We paid to McCulloch & Booth, for the right to use the improved method of refining our argentiferous gold bullion, \$25,000;—thus making an aggregate of

\$165,000 paid in these cases. But, in addition to these, there have been numerous instances in which patent rights, or the privilege of using in the service of the Government patented articles, have been purchased by the Departments, some of which instances I find cited in connection with the report of the Select Committee of the House of Representatives, for which were paid \$178,032; making an aggregate of \$343,000 paid by the United States for patents and the use of patented articles.

Since I have been a member of the Senate, when meritorious individuals have come before us, who had made important discoveries, we have aided them to test their discoveries by appropriations, amounting in the whole to \$120,000.

I mention these facts to show that precedents are all in favor of such use of the public money to enable the Government to avail itself of important discoveries.

I will not detain the Senate by saying more on this subject. I will briefly sum up. This discovery is a most valuable one to the human family at large. The two branches of our public service, the Army and Navy, have availed themselves extensively of it. It is one of the most valuable remedial agents that the world has ever known. It is in constant and growing use. This idea which we are thus using, not only prolongs human life, and protects our soldiers and our sailors, and all in our public service from immense suffering, but it is saving, in that mode of treating diseases, thousands upon thousands of dollars every year and every month. This individual cannot enforce his legal rights against anybody, owing to the very nature of the case. We are making use of his property to our great benefit, and he is receiving no compensation whatever for it. Then the papers before me, as I have read them, show that he is the individual who is entitled to compensation, if any one, for the use of this property. We find that the practice of the Government—a very enlightened and useful practice, in my opinion—has been in favor of appropriations of this sort. Then, sir, I ask if this is not a proper occasion for the continuance of this practice? When was there ever before us a more meritorious case? The medical profession throughout the country sustain me in the assertion that this is the most valuable remedial agent that ever has been known. How can we, then, in justice to ourselves, in common justice to the individual who has furnished us this valuable, or rather invaluable remedy, refuse to pay him for it?

Mr. SMITH. That a discovery has been made, I admit; and that discovery is, that the effect of ether, taken into the lungs, is to produce insensibility in the human system. I agree with the honorable gentleman from Arkansas, that this substance, when taken into the lungs, will produce insensibility in the subject under the operation of the knife. I agree with him, that it is a great boon to humanity; but I deny that it is a patentable discovery. And I pledge whatever reputation I may have, that if the Senate will allow me, at the next session of Congress, an opportunity to be heard on this subject, I will make out a case for the family of Dr. Horace Wells, deceased. If the subject shall then be referred to the judgment of a committee of this body, I will be prepared to make out a case worthy the most grave and serious consideration.

Mr. GWIN. Mr. President, as I formerly belonged to the medical profession, I wish to indorse

everything that has been said by my friend from Arkansas in regard to this valuable agent. I confess that I came to the examination of this question with extreme reluctance. I had been out of the profession for many years, and I attempted in every way I possibly could to throw it off; but, having been requested by those whom I could not disoblige, to look into it, I must acknowledge that this is one of the most important discoveries that has ever been made in the medical profession; and this gentleman being the patentee, I could look upon it in no other light than that, as we have availed ourselves of his property—for his patent is his property—we should in equity and justice recompense him for it. I came to this conclusion with reluctance; for I was very much disposed, without examination, to go against the claim. But having examined it, I could do nothing less than to add my testimony to that of the Senator from Arkansas, both of us having been in the medical profession.

Mr. SHIELDS. I beg to state how the matter came before the Committee on Military Affairs. The subject was investigated by a Select Committee of the House of Representatives, and I was informed that the claims which the honorable Senator from Connecticut says he represents, were examined before that committee, and that committee has reported. One of my colleagues in the House, [Mr. BISSELL,] a physician by profession—and permit me to say, not only an able physician, but as veracious a gentleman as any in Congress—assured me that after a full and fair inquiry, instituted by him and the residue of the committee, of which the late lamented Mr. Rantoul, who was a highly-educated and well-informed man, was a member, and after all the claimants had been heard, and after an examination of the evidence, the committee had come to the unanimous conclusion, that Dr. Morton was the discoverer of this great remedial agent. It is a subject which I did not very well understand myself. The Committee on Military Affairs, therefore, committed it to the honorable Senator from Arkansas, who is a physician by profession, and who understands the whole subject. A professional gentleman of the other House, eminent in his profession, and a highly-educated man—a man of veracity and honor, assured me that the committee of that body had thus determined, after a full and fair inquiry.

It has been stated that this is one of the greatest discoveries of modern times. I believe it is. Of that, however, I only know this—that if this remedial agent had been known when the honorable Senator from Connecticut says he understood it was, it was unpardonable that its use was not applied to the American army in the late war with Mexico. It was criminal that it was not applied, if it was known, and it was wicked in that gentleman to withhold his information from the country on such an occasion as that; for, sir, I believe it would have saved thousands and thousands of lives.

Mr. CLEMENS. No doubt of it.

Mr. SHIELDS. Any man who witnessed the scenes which some of us were there called upon to witness, well knows that such an agent would have saved thousands of lives. Sir, thousands of our bravest and best men fell under the pains and afflictions that followed surgical operations. I have seen so much of that, that I was rejoiced to have an opportunity, when I found there was such an agent discovered, to give it my support

in any way; and although I was not acquainted with the subject, I was happy to have it in my power to turn it over to the honorable Senator from Arkansas, who was acquainted with it. I venture to say that there is not a professional man in America or in Europe, who will not consider this the most beneficial discovery since the discovery of vaccination.

I cannot tell whether Dr. Morton is the discoverer or not; I know that those who have examined the subject thoroughly say that he is the discoverer. I have seen in addition, for he has shown it to me, the medal of one of the first medical institutions in the world—that of Paris—acknowledging, and in the name of France pronouncing him the discoverer of this agent, and that he had been able—for it was a good fortune on his part—to make a discovery which has been more beneficial to humanity, than any discovery made in the medical professions since the time of vaccination.

Mr. HALE. I am not one of those who object to the proposition on account of the amount of money. If this discovery really belongs to Dr. Morton, it is no more than right that we should pay for it; because, whatever may be the value of the patent right, it is such a discovery that he cannot enforce his patent rights. It seems to me that the Government of the United States, having granted a patent by their own officers, are estopped from denying its validity; and as the Government are making use of it in the Army and Navy so extensively, it seems to me but fair to compensate this gentleman.

I have been through the Massachusetts general hospital, where this remedial agent was first introduced, and where it was tested. I went through all the wards and rooms of that hospital, and I saw every form of disease and suffering. I went into the dissecting room, and I confess my blood almost ran cold as I looked at the instruments of torture, as they appeared to me, which were about the room; but I was assured by the physicians attending upon that hospital that, by the use of this remedial agent, patients were insensible to the operation of these instruments of torture—that the effect of it was to make them go quietly to sleep; and that the most difficult and dangerous operations were performed there every day, without those on whom they were performed being sensible of them. That great hospital is one of the finest charities on the face of the earth; and by the operation of this agent the most revolting surgical operations are performed every day, while the patients are, as it were, in a deep sleep.

I do not believe there has been a greater contribution made to the cause of humanity anywhere. I do not put this discovery second to vaccination, or anything else; and if the Senate are determined to vote upon it to-day, I hope they will make this appropriation; and with my present convictions, although I should be glad to postpone the subject until the next session, in order to avoid all danger of injustice, I must vote for this appropriation.

Mr. DOUGLAS. I shall occupy but a few moments as to the claim of Dr. Wells. I hold here a paper which has been laid on our tables, and which I understand to be an abstract of testimony taken in the House of Representatives. I find here two letters, which have passed between Dr. Morton and Dr. Wells, putting to rest the claim of Dr. Wells, brought forward by the Senator from Connecticut. When Dr. Morton made

his discovery, as he alleges, he wrote to his old friend and partner, Dr. Wells, to this effect:

BOSTON, October 19, 1846.

FRIEND WELLS—Dear Sir: I write to inform you that I have discovered a preparation, by inhaling which, a person is thrown into sound sleep. The time required to produce sleep is only a few moments, and the time in which persons remain asleep can be regulated at pleasure. While in this state the severest surgical or dental operations may be performed, the patient not experiencing the slightest pain. I have perfected it, and am now about sending out agents to dispose of the right to use it. I will dispose of a right to an individual to use it in his own practice alone, or for a town, county, or State. My object in writing you is to know if you would not like to visit New York and the other cities, and dispose of rights upon shares. I have used the compound in more than one hundred and sixty cases in extracting teeth, and I have been invited to administer to patients in the Massachusetts general hospital, and have succeeded in every case.

The Professors, Warren and Hayward, have given me written certificates to this effect. I have administered it at the hospital in the presence of the students and physicians—the room for operations being as full as possible. For further particulars I will refer you to extracts from the daily journals of this city, which I forward to you.

Respectfully yours, WILLIAM T. G. MORTON.

Let us see what Dr. Wells said in reply:

HARTFORD, CONNECTICUT, October 20, 1846.

DR. MORTON—Dear Sir: Your letter dated yesterday, is just received, and I hasten to answer it, for fear you will adopt a method in disposing of your rights, which will defeat your object. Before you make any arrangements whatever, I wish to see you. I think I will be in Boston the first of next week—probably Monday night. If the operation of administering the gas is not attended with too much trouble, and will produce the effect you state, it will, undoubtedly, be a fortune to you, provided it is rightly managed. Yours, in haste, H. WELLS.

Now, upon the face of these two documents, I do not understand exactly how it is broadly asserted here, that Dr. Wells is the inventor or discoverer of this remedial agent.

I confess that before I examined the matter my prejudices were against this claim, until my colleague in the other House, [Mr. BISSELL,] who is a regularly-educated physician, a man of great intelligence, who has had practice as a physician, took it up, and as chairman of that Select Committee gave it a thorough investigation. This report produced entire conviction upon my mind that Dr. Morton was entitled to the credit of this discovery.

I do not mean, nor does that report mean, that he discovered sulphuric ether, or that he was the first man that ever administered sulphuric ether, but simply that he discovered the application of sulphuric ether with reference to destroying pain in surgical operations, and that he discovered it to a degree and extent in which it had not before been administered, and in which it was supposed, was not safe to administer it. He risked his own life by experiments upon his own person; and then he administered it to other persons and ran the risk of a prosecution for malpractice in the event that it should fail. I became satisfied from the testimony that he alone made the experiments, and he alone introduced it to the public; that he introduced it first into the general hospital of Massachusetts, and from there to the world; that he took the entire, sole, and exclusive responsibility of the use and introduction of this agent, until its entire success had been established.

I also find from the report, that while these experiments were going on—while it was doubtful whether they would prove successful—Dr. Jackson was ridiculing and denouncing Dr. Morton as a reckless man, who was hazarding the life of his patients by administering this agent to them, and

that he never set up his claim, although experiments were being made in the immediate vicinity of his own house, until after those experiments had proven successful, and the judgment of the world was about to be pronounced in favor of Dr. Morton, and of this invention that had been made by him.

I find this in the report of the committee of the House of Representatives, and I understand that both parties were represented before that committee. Taking, then, the report of that committee, before whom both parties were represented in person, and by their counsel, where testimony was adduced, and taking that report in connection with the judgment of the general hospital of Massachusetts, where the first experiments were made, and taking all the testimony together, I cannot doubt that the credit is solely due to Dr. Morton.

Mr. WALKER. Mr. President, I will ask the attention of the Senate for a very few moments. I profess to be one who has looked into this matter from its foundation to its capstone. I have read everything that has been printed; everything that is extant on the part of both parties; and I believe everything which they have in manuscript.

After Dr. Morton had administered this anæsthetic agent in his dental establishment, he immediately resorted to the Massachusetts general hospital. He got the consent of such men as Dr. Warren, Dr. Hayward, and Dr. Bigelow, that he might there administer it in a capital operation. That operation was performed on the 16th of October, 1846. Again he performed an operation on the 17th of October, and so he continued down to the 2d January, 1847, when these surgeons say was the first they ever heard of the claim of Dr. Jackson. The most distinguished medical men in America swear and certify to this. But this is not all. This matter underwent a serious and candid investigation before the medical men, the surgeons, and trustees of that institution, and they came solemnly to the conclusion, first, that Dr. Jackson had never made any discovery in regard to ether which had not been known long before. Second, that Dr. Morton did, in 1846, manifest, and make plain, and publish to the world, that sulphuric ether, administered in proper quantities and in a proper manner, would produce entire insensibility to any operation. They also decided most solemnly against the claims of Dr. Wells. Not only is that so, but we have here under the hand of Dr. Wells, an acknowledgment that the discovery was Dr. Morton's. Dr. Wells not merely acknowledged it to be Dr. Morton's discovery, but gave him advice about it, and said it would be a fortune to him if he managed it rightly.

Did the general hospital of Massachusetts stop there? No, sir. Dr. Jackson came forward before those great men, and expressed his dissatisfaction at the decision which they had made. He prayed that they might review their decision, and at his request they did review it, one year afterwards, and came solemnly again to the decision to which they had previously come. This was in Boston, where the parties lived. This decision was arrived at by the most scientific men of the continent of America, if not of the world. They reviewed their decision, had the claims again laid before them, and came again, solemnly, to the same conclusion.

In the mean time, however, and while Dr. Jackson was denouncing Dr. Morton as a "reckless"

man; as one who had made no discovery whatever, and who would kill somebody if he did not stop his experiments, wrote a letter to M. Elie de Beaumont, of the Academy of Arts and Sciences of Paris. That letter was sent under secret seal, and it was dated November 13, 1846, just at the very time when he was denouncing Dr. Morton as a reckless wretch who would kill somebody. He sent that letter, with a request that it should not be opened until he gave further information in regard to it. The investigation went on before these daring men of the Massachusetts general hospital, and by Dr. Morton, no less daring, until the 2d of November, 1846; and in this country, Dr. Jackson was never heard of as claiming the discovery before that time. In December, 1846, he wrote another letter, requesting M. De Beaumont to open the sealed package. He opened it and read it, and, on the spur of the occasion, M. Velpeau answered it with a sneer, and said:

"The secret contained in the note which has been read is no longer a secret; the medical journals published in America and England have divulged it in the months of November and December. A letter from Dr. Warren, of Boston, communicated the information to me more than one month ago; and Dr. Willis Fisher, of the same city, proposed that I should try its effects at La Charité towards the middle of last December."

That letter of Dr. Jackson's was thus answered by a no less distinguished man than M. Velpeau, before the Academy of Arts and Sciences in Paris. But this secret letter had a fatal effect—an effect which I am sure the Academy of Arts and Sciences never ceased to regret. What did it do? It procured, upon the excitement of the moment, a decision of the Academy of Arts and Sciences of France, awarding to Dr. Jackson twenty-five hundred francs, being one of the Monthyon prizes of that institution, and he received the money. But when the good Dr. Warren, and Dr. Hayward, and Dr. Bigelow, and others of the Massachusetts general hospital, who knew all about it, placed this persecuted man, Dr. Morton, before the world, and established his claim, what did the Academy of Arts and Sciences do? We know it is the nature of that institution never to take back anything which it does. It will not acknowledge fallibility; but it went to the extent to which it could go. It awarded to Dr. Morton another prize of the Monthyon foundation, of twenty-five hundred francs—as what? Just for what Fulton was, just for what Jenner, the discoverer of vaccination, was, and for what all other men are, who come before the world making discoveries. The Academy of Arts and Sciences gave him this Monthyon prize for being the man who had discovered, and made beneficial to the world, the use of sulphuric ether as an anæsthetic agent.

Notwithstanding that Dr. Morton had to fight the medical and literary magazines of the country—notwithstanding he had to fight Dr. Jackson, and almost everybody else—for nearly all the surgeons in the country, except those in the Massachusetts general hospital, frowned upon him—notwithstanding all this reduced him to poverty; yet, like a noble man, as he is, he declined to receive the two thousand five hundred francs in money. Still, so anxious was the Academy of Arts and Sciences to place in his hands evidences of their exalted recognition of his rights, that they directed a certain portion of the fund to be paid in the shape of their largest gold medal. That did not exhaust the entire fund, and the friends of

Dr. Morton in France took the balance of it and used it in inclosing the medal in a beautiful gold frame, so that it altogether now presents the beautiful thing which I hold in my hand, [exhibiting it to the Senate.] Dr. Morton would not receive the money, but he received that which he could treasure in his heart, and could look upon as an evidence of the appreciation of his exertions by this noble Academy of Arts and Sciences of Paris. It is a noble appreciation of him who gave this invaluable discovery to the world. It shows whom they considered as the real discoverer.

When you come to look at the testimony on which the claim of Dr. Jackson is based; when you come to inquire really what it is, it would seem most astounding that any one in the world should come forward with such a claim. What was it? At first he claimed nothing more than that he had told Dr. Morton that ether could be taken safely into the lungs. Anybody in the world could have told him that. This substance had been known since the thirteenth century. Its formation was accurately described by Valerius Cordus, in the sixteenth century. Frobenius first designated it ether, and published an account of it in the philosophical transactions in 1730. Its use as a medical agent, first alluded to by Valerius Cordus, and mentioned by Hoffman, Cullen, Alston, Lewis, and Monroe, and other writers of the last century, has long been familiarly known. The history of its use by inhalation, commenced with the pamphlet published in 1795, by Richard Pearson; and several communications from the same Dr. Pearson are to be found in the work of Dr. Beddoes on *Factitious Airts*, published at Bristol, England, in 1796. The same work contains a letter from one of Dr. Thornton's patients, giving an account of his use of ether, by Dr. Thornton's advice, in a case of pectoral catarrh. He says, "it gave almost immediate relief both to the oppression and pain in the chest." On the second trial, he inhaled two spoonfuls, with "immediate relief, as before, and I very soon after *fell asleep*." In 1815, Nysten, in the *Directory of Medical Sciences*, speaks of the inhalation of ether as familiarly known for *mitigating pains* in colic. For the last fifty years, most therapeutic authors mention its use by inhalation in asthma, &c., as Duncan, Murray, Brande, Christison, Pereira, Thompson, Barbier, Wendt, Vogt, Sundelin, &c. Effects analogous to intoxication, when ether is inhaled, are stated by American authors, as Godman, (1822,) Mitchell, (1832,) Professor Samuel Jackson, (1833,) Wood & Bache, (1834,) Miller, (1846, and early in that year.)

Dr. John C. Warren, in his work on *Etherization*, says:

"The general properties of ether have been known for more than a century, and the effect of its inhalation, in producing exhilaration and insensibility, has been understood for many years, not only by the scientific, but by young men in colleges and schools, and in the shop of the apothecary, who have frequently employed it for these purposes."

From the days of Hippocrates down, there has been an effort to obtain an anæsthetic agent—something to lull the patient in surgical operations. But until Dr. Morton, with what physicians termed a daring spirit, came forward and demonstrated it to the world, the right agent had never been found. There is among the testimony, the certificate of the person on whom the agent was first employed. Dr. Morton first extracted teeth in this way. He then went to Dr. Warren, and got him to consent to perform a surgical operation upon a patient, rendered insensible by this agent, which he did

perform on the 16th of October, 1846. Dr. Morton repeated his experiments in surgical operations at the hospital, on the 17th of October, and continually from that day down to the 2d of January, 1847, when Dr. Jackson first made known that he ever had any claim.

The trustees of the general hospital of Massachusetts, as a testimonial of the services of Dr. Morton, raised a fund of \$1,000; but knowing his sensitiveness on the subject, and in order to make the compliment more acceptable to him, that there might remain something connected with it as an enduring monument of their gratitude, they inclosed the amount in a silver casket, containing an engraving manifesting their fourth decision, as you may say, in his favor.

Again, as another testimonial, I may state that the subject was brought up in the Thirtieth Congress, before a select committee of the House of Representatives, and with all the testimony before them, they decided that Dr. Morton was the discoverer. Here, again, in this Congress, after another review of all the testimony, Dr. Morton appearing before them in person, and Dr. Jackson, both in person and by counsel, a select committee of the House of Representatives has decided Dr. Morton to be the discoverer.

All that there is now to answer against his claim, is the remonstrance to which the Senator from Maine has alluded; and what is that remonstrance? It is a remonstrance said to be signed by one hundred and forty-four physicians. The register of physicians of Massachusetts, shows that there are about fifteen hundred in that State. Not one of these remonstrators was in the general hospital of Massachusetts at the time this discovery was brought out; but on the contrary, a great many of them are dentists, who were personal enemies and personal rivals of Dr. Morton, and they are to this day his personal rivals. At the time he was risking his life to bring out this discovery, they were denouncing him, and endeavoring to put him down. They were getting up prosecutions against him, to drive him, if possible, from respectable society. Yet these are the men who come forward and remonstrate! But, is it true, as the remonstrance states, that it is from "Boston and its vicinity?" I have here the State record of Massachusetts, and I find that the names on that remonstrance are scattered all over the State. There are three hundred medical men in Boston alone, and here are one hundred and forty-four remonstrants from the whole State of Massachusetts, and these are Dr. Morton's rivals—men who had first given him notes, and then refused to pay them, and became his enemies, and tried to make out that he had made no discovery! The remonstrance is dated in February last, and they have been ransacking the State of Massachusetts from that time to this, to get up remonstrators against Dr. Morton, and they have succeeded in getting one hundred and forty-four out of fifteen hundred in that State.

We have two reports of the hospital of Massachusetts; we have the prize awarded by the Academy of Arts and Sciences of Paris; we have the award of a casket and \$1,000 by the trustees of the Massachusetts hospital; we have the reports of two select committees of the House of Representatives; we have the concurrent voice of two committees—the Committee on Military Affairs and the Committee on Naval Affairs—of this body; and there is nothing to answer it but this simple remonstrance of which we have heard to-day.

We have nothing in an authentic shape to controvert all these testimonials. Most of these remonstrants do not state that they know anything about the facts, but simply give their "belief." Why not go to Dr. Warren, Dr. Hayward, or Dr. Bigelow? Why not go to the various men who cut off legs and arms, and extirpated tumors, and performed the most dreadful surgical operations with the aid of this agent, when Dr. Morton was making his first experiments? Why did not Dr. Jackson do that? Why did he not bring the names of some surgeons to certify that he discovered this? He could not do it.

These awards to Dr. Morton, the concurrent testimony of all these individuals, speak a voice in America and Europe, and now it is even heard in Asia. But why do we get up a controversy here about the real discoverer of this remedial agent? I have in my possession the original patent, in which it is expressly recited that Dr. Jackson has assigned all his interest in the matter. How did he get any interest? It was through the mistake of the lawyer who was employed in regard to obtaining a patent. Dr. Jackson went to him, and finding him employed in endeavoring to obtain a patent, observed that he had something to do with that matter. The lawyer asked him what he had to do with it. "Why, I told Dr. Morton that ether could be administered with safety." Everybody knew that before. But did he know that pain could be destroyed under its administration? No, sir. He does not attempt to prove it. But let anybody read the review by both select committees of the House of Representatives, of the testimony by which he undertakes to prove it; and if they could ever thereafter believe his witness, it is more than I could do. There is not one particle of testimony given, to prove that Dr. Jackson ever said or ever supposed that ether could be so administered as to annihilate pain. All that Dr. Morton wanted to know, in order to be sure, was, that he was not running the risk of murder. Dr. Jackson said it could be administered with safety. He told the patent lawyer that he had something to do with it—that he had given this information to Dr. Morton; and then that lawyer, Mr. Eddy, through a mistake, not knowing the facts, proposed that Dr. Jackson should have some remuneration. What do you think Dr. Jackson was content with, in the first instance? Did he claim any part of this discovery?

Mr. Eddy thought that Dr. Morton ought to make some credit, or do something; and all Dr. Jackson then asked was \$500 for medical advice; and, according to his own language, he went home and charged Dr. Morton upon his books \$500 for medical advice; and Dr. Morton executed a bond to pay Dr. Jackson \$500, provided ten per cent. upon the patent would make that sum. He subsequently claimed ten per cent. upon the patent; and then claimed twenty-five per cent.; and ultimately claimed that he was the real discoverer of the whole. But, however that may be, whatever straits Dr. Morton may have been in, I say, here is the patent in the name of Dr. Morton, and in it Dr. Jackson surrenders any title he could by possibility have. But, whatever Dr. Jackson may be able to show hereafter that he is entitled to, I shall be willing to grant to him.

I must make this further remark: Dr. Morton has been pursued in every step he has taken in this matter. It is in evidence before the committee of the House of Representatives, and they have

reported the fact, that there were raised in England at one time by subscription £10,000, for the discoverer of the anæsthetic properties of ether, and the payment of it to Dr. Morton was prevented by the agitation raised by Dr. Jackson. Dr. Morton has been pursued by people hunting on his track. They are still following him. Here they are, now, pursuing him through the mouth of the Senator from Connecticut. But I do not blame him for making any representations he may see proper in regard to Dr. Wells; but I say that the original claim of Dr. Wells is altogether refuted by his own evidence, and by his own advice to Dr. Morton.

Then, taking all these public monuments, as you may call them, as evidence of the right of Dr. Morton, running from 1846 to 1852, how can it be possibly said that we are taking a snap judgment on anybody? It cannot be truly said. This subject has been long considered, and the judgment of the world has been in favor of Dr. Morton's rights. But here is the patent, and here he is the assignee of any rights that Dr. Jackson may have had.

A proposition now comes up from the Committee on Military Affairs to procure a surrender of that patent; and for what reason is that opposed? Why, that by paying this, we may do something wrong to some other individual. Sir, the patent has been granted at the Patent Office. That is the tribunal established by the Constitution and the laws to decide to whom a patent is due. That institution did decide the patent to be due to Dr. Morton, and it was issued to him, and any rights which Dr. Jackson had in it are recited in the patent as being assigned to Dr. Morton. Then he (Dr. Jackson) can have no claims. But it is not pretended that Dr. Jackson or Dr. Wells have got a patent. It is known that they did not get any. Dr. Morton has the patent, and this appropriation is proposed for the purpose of obtaining the surrender of that patent.

Mr. MALLORY. I am pleased to have this opportunity to manifest, by a vote upon this proposition, my appreciation of the importance of the subject to which it refers; and, sir, if no voice in its behalf had been hitherto raised, if no advocate had ever before appeared to press the claims of him whose successful devotion, whose self-sacrificing labors have secured for him throughout the earth this heaven-born gift—I would have considered it one of the high privileges of the place I occupy to stand forth in that attitude. But, sir, such fortunately is not its position; for the earnest appeals of men, women, and children, the united and consistent testimony of the learned and the unlettered throughout this broad land, have raised up for it here unwavering friends.

This amendment, Mr. President, proposes to pay to the discoverer of the anæsthetic properties of sulphuric ether, inhaled, and of their extraordinary advantages to medicine and surgery, \$100,000, upon the condition that he shall relinquish it to the free enjoyment of mankind, and abandon all the rights of a discoverer and patentee. If the question be asked, What is the character of the service rendered, what is the utility of the discovery?—the response comes from thousands of our own fellow-citizens, in every walk of life, whom gratitude has made eloquent. It comes from the lowly couch of the poor-house patient, and from the aristocratic mansion of the millionaire—from feeble woman in the agonies entailed

upon her first disobedience, and from the stern, strong man writhing in pain. It comes from your battle-fields, from your military, naval, and civil hospitals, from your gallant soldiers and sailors tortured by wounds and amputations. It comes to you from the practitioner in every department of medicine, and with our consent the surgeons of the Old and the New World hail it as the great discovery of the age. Its claims have been examined by select committees of Congress, aided by able counsel, with an industry and accuracy equally honorable to them and to the subject. The trustees of the Massachusetts general hospital presented the discoverer with \$1,000 and an appropriate letter. The chiefs of our own Departments, our Surgeon General, and the head of our Naval Bureau of Medicine and Surgery, give it their unqualified approval, and the Academy of Sciences of Paris, after a thorough investigation of its character, conferred upon its discoverer the "Monthyon golden medal" as an extraordinary mark of its approbation.

Such are a few of the thousand evidences of the various characters from Europe and America in its favor. And well, sir, does it merit this praise. Hitherto the surgeon's skill, though advancing with gigantic strides, has been circumscribed and controlled by the power of endurance of his patient; and many operations which comparative anatomy justifies and demands for the salvation of life, have been rendered impracticable by their tortures upon an enfeebled or agonized frame, or by their violent shock to the whole nervous system; and thousands have annually perished whom this discovery might have saved. Men of undoubted courage, wounded at last, after facing death in many forms, shrunk with undefined terror from the prospect which the cold-blooded torture of the surgeon's knife holds before their eyes; and timid woman, sinking beneath disease, not unfrequently prefers the pains of death to the untold horrors of the operator's table. But all this is now passed. The knife has lost its terrors, the tourniquet and saw are regarded without a shudder, and the appearance of the surgeon by the pallet of the untimely sufferer is hailed with joy, for he not only banishes pain, but substitutes for an anguished frame the happy dreams of a joyous spirit. In the language of the venerable and eminent Dr. Warren—

"A new era has opened to the operating surgeon. His visitations on the most delicate parts are performed not only without the agonizing screams he has been accustomed to hear, but sometimes with a state of perfect insensibility, and occasionally even with the expression of pleasure on the part of the patient. Who could have imagined that drawing the knife over the delicate skin of the face might produce a sensation of unmixed delight?—that the turning and twisting of instruments in the most sensitive parts might be accompanied by a beautiful dream?—that the contorting of ankylosed joints should coexist with a celestial vision? If Ambrose Paré, and Louis, and Dessault, and Cheselden, and Hunter, and Cooper, could see what our eyes daily witness, how would they long to come among us, and perform their exploits once more! And with what fresh vigor does the living surgeon, who is ready to resign the scalpel, grasp it, and wish again to go through his career under new auspices!"

If I felt justified, Mr. President, in view of the pressing legislation yet before us, I would embrace this occasion to give the conclusive testimony of the principal practitioners of Europe and America in its behalf; but I do not feel authorized to consume a moment beyond a mere reference to them. In the eloquent testimony of Holmes—

"The knife is searching for disease—the pulleys are drag-

ging back dislocated limbs—nature herself is working out the primal curse, which doomed the tenderest of her creatures to the sharpest of her trials; but the fierce extremity of suffering has been steeped in the waters of forgetfulness, and the deepest furrow in the knotted brow of agony has been smoothed forever.”

And now, Mr. President, if it be difficult to establish a standard by which merit generally is to be rewarded, how utterly impossible must it be to determine its proper bounds in a case like the present, in which an humble individual is the donor, and the whole human family the recipient. His most enduring and valuable reward will be in the undying gratitude of a posterity whose lot is suffering and pain, and a supreme happiness flowing from gratitude to God for being made the medium of such a boon to his creatures. But, sir, let us fulfill *our* duty. *We* cannot *PAY* Dr. Morton. His services are beyond price; but we can place his future life beyond the reach of poverty, and in this manner do justice to ourselves; for, Mr. President, to the living searchers after truth, as well as to those children of genius who are yet to struggle in her paths, and in the eyes of all honorable men, the course of the American Senate upon this question will be a beacon of warning or of hope.

I believe not the worn-out apophthegm, that Republics are ungrateful. Ingratitude is the crime of

men, not of political organization—and the sons of Adam possess in common the same virtues and vices. But yet, sir, there is much upon history’s page to justify the proposition, even within our own short political existence. The graves of our revolutionary sages are unknown to their free and happy descendants. No Old Mortality renews their feeble letters; and the monument of its father and hero struggles lingeringly upwards, stone by stone, in spite of their seeming indifference.

Fulton’s merits were disregarded; and he was suffered to die owing more dollars than would have covered him in his grave. In pleasing contrast to this, sir, is the grant of the British Parliament of \$150,000 to Dr. Jenner for his discovery of vaccination; and its liberal reward of discoverers in various walks of science. I am persuaded that the objection based upon a constitutional prohibition, made by the honorable Senator from New York, is not seriously urged; and certainly upon one of the alternatives suggested by him, we can reward this applicant. I never saw him till within a day or two, and I know personally nothing of him, but entertain no doubt of the justice of his claim, and hope the amendment will pass.

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